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Archaeological Survey of Cooper Lake, Delivery Order Number 7, 1989

Cultural Resource Studies for Cooper Lake,
Hopkins and Delta Counties, Texas

David H. Journey, Jeffery Bohlin, Sue E. Linder Linsley,
S. Christopher Caran, and David R. Pedler

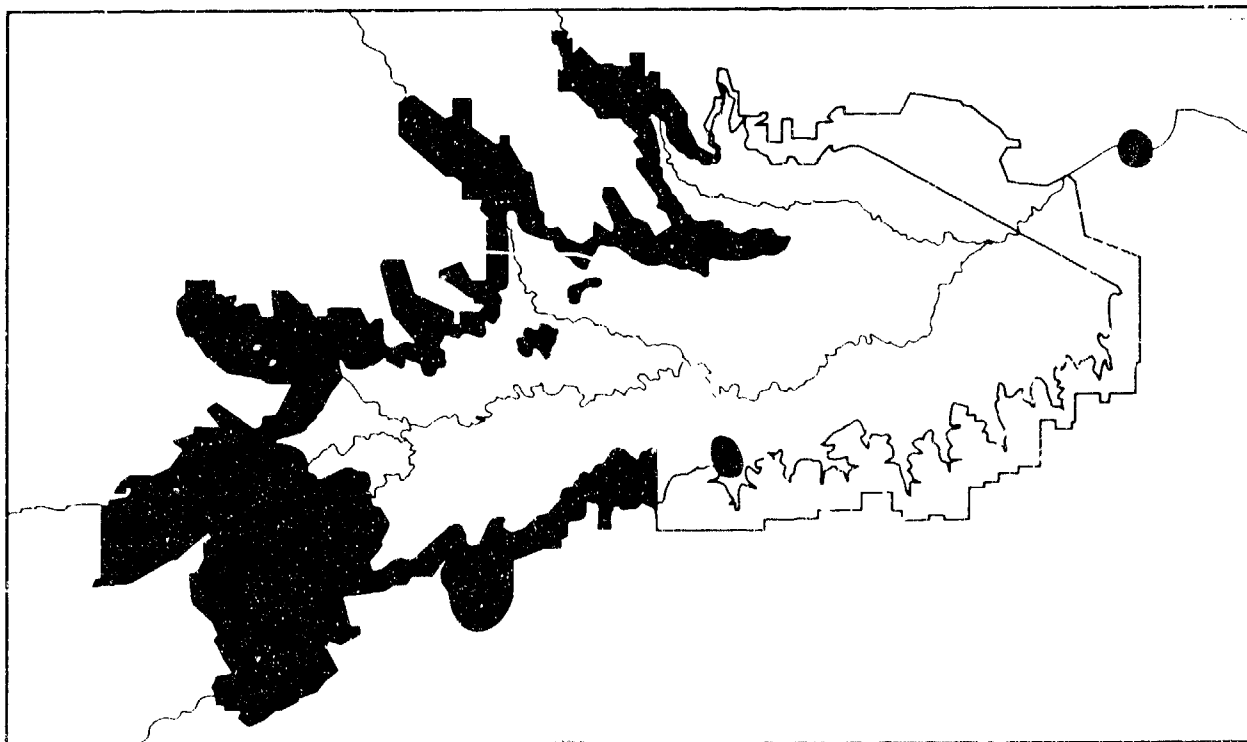
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<p>This report presents the results of cultural resources survey and preliminary evaluation conducted for a 5,273 ha (13,030 acre) portion of the Cooper Lake project area. All loci selected for survey were elevated higher than 132.6 m (435 ft) above mean sea level. The survey work was conducted from July to December 1989. Prehistoric and historic archaeological sites were assessed, and all sites greater than 50 years old were provided state site registration numbers. Machine-assisted deep testing also was conducted at selected localities within the project area to search for deeply buried sites, interpret the geomorphology of those areas, and aid description of site stratigraphy and factors influencing site formation. The survey's findings are reported, and all identified archaeological sites and their associated material culture are described in detail. National Register recommendations of clearly eligible, clearly not eligible, and further work are made for each site. A master map showing the locations of all sites and deep testing loci, a curation inventory, site survey forms, and a summary of previously surveyed portions of the park have been submitted separately to the U.S. Army Corps of Engineers, Fort Worth District.</p>					
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ABSTRACT

This report presents the results of cultural resources survey and preliminary evaluation conducted for a 5,273 ha (13,030 acre) portion of the Cooper Lake project area. All loci selected for survey were elevated higher than 132.6 m (435 ft) above mean sea level. The survey work was conducted from July to December 1989. Archaeological sites from both the Prehistoric and Historic periods were assessed, and all sites greater than 50 years old were provided state site registration numbers. Machine-assisted deep testing was also conducted at selected localities within the project area to search for deeply buried sites, interpret the geomorphology of those areas, and aid description of site stratigraphy and factors influencing site formation. The survey's findings are reported, and all identified archaeological sites and their associated material culture are described in detail. National Register recommendations of clearly eligible, clearly not eligible, and further work are made for each site. A master map showing the locations of all sites and deep testing loci, a curation inventory, site survey forms, and a summary of previously surveyed portions of the parks have been submitted separately to the U.S. Army Corps of Engineers, Fort Worth District.

MANAGEMENT SUMMARY

The work described in this report was conducted by the Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, under the terms of Delivery Order Number 7, Contract DACW63-87-D-0017, issued by the Forth Worth District, U.S. Army Corps of Engineers on 10 July 1989. The goal of this survey was to identify (or relocate, in the case of previously recorded sites) all cultural resources greater than 50 years old, and to determine which of those sites may be eligible for inclusion in the National Register of Historic Places under criteria A, B, C, or D. The research also sought to obtain data that would address the research themes outlined in the Cooper Lake Research Design (Moir and Journey 1988). A brief outline of these themes is presented in Chapter 4, Research Design.

A total area of 5,273 ha (13,030 acres), representing ca. 28% of the 18,723 ha (46,265 acre) impact area for the entire Cooper Lake project, was examined via pedestrian reconnaissance following the procedures outlined in Chapter 5, Methodology. Selected portions of the study area were also examined via subsurface shovel and machine-assisted deep testing. All surveyed areas are at elevations greater than 132.6 m (435 ft) above mean sea level.

In addition to these archaeological investigations, a literature search, informant interviews, and archival evaluations were conducted to determine whether age of construction or the names of occupants could be identified for specific historic archaeological properties. Since absentee landlords traditionally have owned most of the properties in the project area, it was impossible to construct occupational histories for many of those properties through archival research alone. However, the former residents of several properties were identified through informant interviews.

Geomorphologic and pedogenic analyses were conducted for the floodplain apron along Finley Branch, and at various localities and sites along the South Sulphur River and its tributaries. In order to ensure continuity in thought, treatment, and methods among the various personnel who have participated in this particular aspect of the Cooper Lake project, an informal meeting attended by all of the project's current and previous geomorphological investigators was convened at site 41HP159 and other locations along Finley Branch. The directives resulting from that meeting were incorporated into the geomorphological investigations presented in this report.

Each site investigated under Delivery Order Number 7 is described in terms of its topographic and environmental settings, mapped soils present, and stratigraphy. The results of previous studies are summarized, where applicable, and the specific field methods employed at each site during the Delivery Order Number 7 investigations are then summarized, and each site is evaluated in terms of its potential to address the settlement patterning, paleoenvironmental reconstruction, technology and subsistence, and material culture research topics outlined in the Cooper Lake Research Design (Moir and Journey 1988). Detailed analysis of material culture remains from the study area as a whole are also provided.

In summary, 153 archaeological sites were investigated in the Cooper Lake project area under Delivery Order Number 7. This total includes 65 prehistoric sites, 66 historic sites, and 16 sites with both historic and prehistoric components. The remaining six these sites were determined to be outside of the project area boundaries. Of the 153 sites examined within the Delivery Order Number 7 study area, four sites were classified as Category I, eligible for the National Register of Historic places (NRHP); 23 sites were classified as Category II, requiring further work for evaluation of NRHP eligibility; and 120 localities were classified as Category III, definitely ineligible for the NRHP.

Introduction

1

The Cooper Lake Project was authorized by an act of Congress approved on 3 August 1955 (Public Law 218, Chapter 501, 84th Congress, 1st Session). The Fort Worth District, U.S. Army Corps of Engineers (CE) is constructing this multipurpose dam and lake project for flood control, water supply, and recreation. The lake is located 2.5 km (4 mi) south of the town of Cooper, in Delta and Hopkins counties, Texas, at river mile 23.2 (37.3 km) on the South Sulphur River. The study area is shown on the USGS Cooper South, Cumby, Klondike, and Tira, Texas, 7.5' topographic quadrangles.

The conservation pool covers 7,812.7 ha (19,305 acres) extending 33.7 km (21 mi) upriver at an elevation of 134.1 m (440 ft) above mean sea level (msl), and the flood control pool covers 9,202.9 ha (22,740 acres; 30-year frequency) at 136 m (446.2 ft) above msl. Seven recreational facilities may cover an estimated 1,335.8 ha (3,300 acres) and structures will occupy 372.3 ha (920 acres). A levee will be required 1.4 km (0.9 mi) downstream from the dam. The guide-taking line for the project is at 137.5 m (451.2 ft) above msl. A total area of 18,723.4 ha (46,265 acres) is included in the project impact area.

Although Cooper Lake has received archaeological investigations spanning over four decades, there has not been an equally intensive archaeological survey of the entire landscape. Nor

have all archaeological sites (particularly those of the Historic and Archaic periods) been equally recorded, despite evidence for their presence in the reservoir. The historic sites have not been equally recorded simply due to a lack of systematic survey and recordation procedures. During the 1970s, for example, most historic sites were simply written off as being disturbed or less than 50 years old, despite archaeological and historical evidence to the contrary. The Archaic period sites, on the other hand, have not been equally recorded because some are deeply buried, which has resulted in erroneous "common knowledge" of an apparently low-density population in the Cooper Lake area during this period. Following provisions of the National Historic Preservation Act of 1966, as amended, and beginning in 1986 the CE has been conducting an inventory and evaluation of cultural resources, followed by actions to mitigate (alleviate) the adverse effects of the project on these resources.

This report presents the results of an archaeological survey of the Delivery Order Number 7 study area (Figure 1-1), which is comprised of previously unsurveyed portions of the greater Cooper Lake study area. The Delivery Order Number 7 study area includes portions of the reservoir which have elevations greater than 132.6 m (435 ft) above msl and encompasses a total area of 5,273.2 ha (13,030 acres).

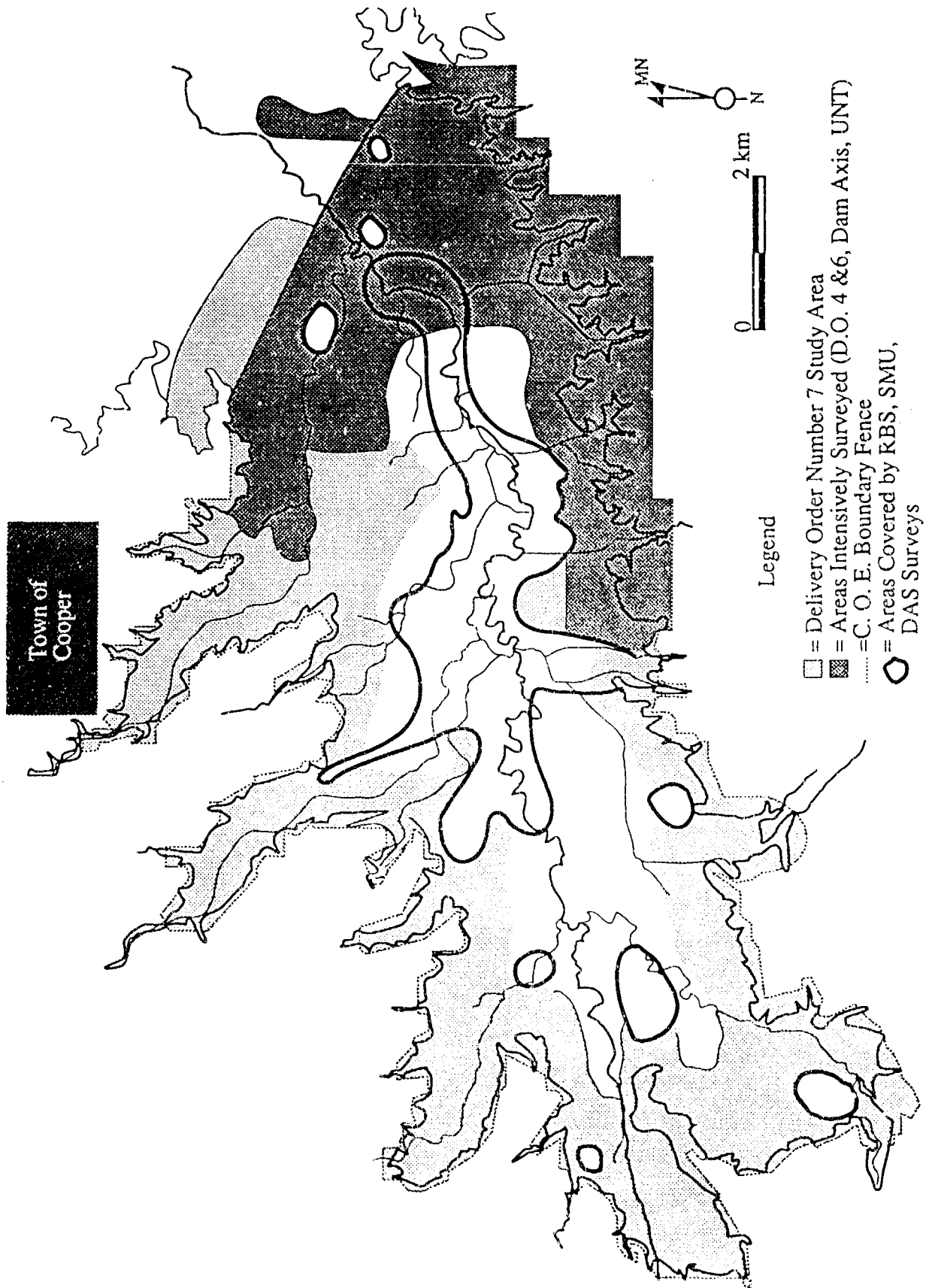


Figure 1-1. Schematic plan of the Delivery Order Number 7 study area.

In addition to reporting the results of this survey, the present report also provides a broad-brush archival overview of previously unstudied areas. In addition, sites recorded in some previously surveyed areas were relocated and reassessed, and are discussed here. This work was conducted under the terms of Delivery Order Number 7, Contract DACW63-87-D-0017.

As required by Section 106 of the National Historic Preservation Act of 1966, the Documentation of No Adverse Effect has been prepared by the CE, the Texas Historical Commission, and the State Historic Preservation Officer (SHPO), and Advisory Council on Historic Preservation under 36 CFR Part 800.9 (c) (1), Federal Register 51 (169), dated 2 September 1986. The Section 106 process has been continued for Cooper Lake, to complete the cultural resources obligations of the Corps of Engineers.

The Cooper Lake project area has been determined eligible as a National Register district, with nine properties (41DT1, 41DT6, 41DT16, 41DT35, 41DT37, 41DT52, 41DT80, 41HP102, 41HP105) designated as multiple resources. Other sites designated as multiple resources may be added to the district as investigations continue.

Because this report presents the findings of the archaeological survey of only a small portion of the entire Cooper Lake project area and is intended as a descriptive summary of the current research, the reader is referred to the various other Cooper Lake documents for more extensive treatment of the project background. The Research Design (Moir and Journey 1988) establishes the historic contexts and research themes. Survey, testing, and mitigation reports by the University of North Texas (UNT) have been completed for the dam axis area (Perttula 1988a, 1988b, 1989b). In addition, extended informant interviews have been conducted by UNT (Lebo 1988; Parish and Perttula 1988), supplementing those conducted by SMU. Other work conducted in the Cooper Lake project area by SMU includes archaeological investigation of the embankment area (Moir,

McGregor, and Journey 1993); disinterment and bioanthropological investigation of historic cemetery 41DT105 (Winchell, Rose, and Moir 1992); and archaeological survey of the proposed Texas Parks and Wildlife recreation areas, the North Texas Municipal Water District Intake Facility, and adjacent floodplain areas (Journey and Bohlin 1993). In addition, geoarchaeological studies have been performed by Bousman, Collins, and Perttula (1988) and Ferring (1993). These reports discuss the project background in greater details than the present one, which is intended as a descriptive summary of the current research.

This report does include a brief summary of previous research and the Research Design. The methodology follows that of the main contract (DACW63-87-D-0017) and the Research Design (Moir and Journey 1988) and is briefly summarized as it applies to the current work order. The geoarchaeological studies performed by Dr. S. Christopher Caran and a summary and description of backhoe excavations on floodplain rises, the floodplain apron, and other areas with high potential for buried sites are presented in Chapter 6. The historical, archival, and informant investigations performed by Michael Harris and Jackie McElhaney are summarized in Chapter 7. Descriptions of the sites investigated under Delivery Order Number 7 are presented in Chapter 8, which specifically includes a summary of the present work. Chapter 9 presents the results of studies of the collections of avocational archaeologists. The conclusions and recommendations for the Delivery Order Number 7 archaeological project are provided in Chapter 10. The rationale and methods employed for the reanalysis and curation of existing artifact collections from Cooper Lake, as per Delivery Order Number 7, are provided in Appendix A. The results of the reanalysis of the ceramic artifacts, lithic artifacts, and archaeobotanical remains are provided in Appendices B, C, and D, respectively.

Description of the Delivery Order Number 7 Study Area

2

GENERAL DESCRIPTION

Cooper Lake is located south of the town of Cooper within the upper drainage of the Sulphur River. This area is characterized as an interface between the Oak-Hickory Forest and Blackland Prairie (Figure 2-1). The boundaries of this complex set of ecological systems have apparently fluctuated in response to major climatic shifts in the past. Today's rainfall averages over 101 cm (40 in) per year, and winter temperatures are mild.

Cooper Lake is bordered by two large geological divisions, the Navarro group (Kemp clay, Corsicana marl, Nacatoch sand, and Neylandville marl) on the north, and by the Midway group (Wills Point clay and Kincaid formation) on the south. These groups are composed of silty clays and sandstone rocks deposited under marine conditions over 200 million years ago during the upper Cretaceous (Navarro group) and the lower Eocene (Midway group). These geological strata consist of folded bands which traverse the land from the southwest to the northeast.

A fault zone is present in the area, and the drainage of the South Sulphur River is determined in part by this fault pattern. This fault, defined as a "graben," may have contributed to the formation of the alluvial fan along Finley Branch (Reid Ferring, personal communication 1989). A graben

is a structurally defined block of land down-thrown between parallel faults.

The geological formations themselves do not yield lithic raw materials of a quality sufficient for the manufacture of prehistoric tools or for use in historic architecture. There is no *in situ* chert. An erosional remnant, the Uvalde gravel, is present in the uplands of Hopkins County south of the South Sulphur River and in limited areas of the upper drainages of tributary streams north of the Cooper Lake study area. These veneer deposits contain variable quantities of quartzite, chert, and petrified wood. All occurrences of these gravels on sites in the Delivery Order Number 7 study area (i.e., sites 41HP183 and 41DT168) were systematically recorded. This survey, in combination with the lithic source study currently being prepared by Banks (n.d., 1990), provides representative coverage of all lithic sources available to prehistoric peoples in the greater Cooper Lake region.

The clay bedrock was used in some areas north of the Sulphur River (e.g., site 41DT154) for the manufacture of brick. Although this clay may also have been used for prehistoric pottery, no clay sourcing studies have been authorized within any of the Cooper Lake work orders.

Within the broader Oak-Hickory Forest and Blackland Prairie biotic provinces, there can be differentiated six topographic and vegetational

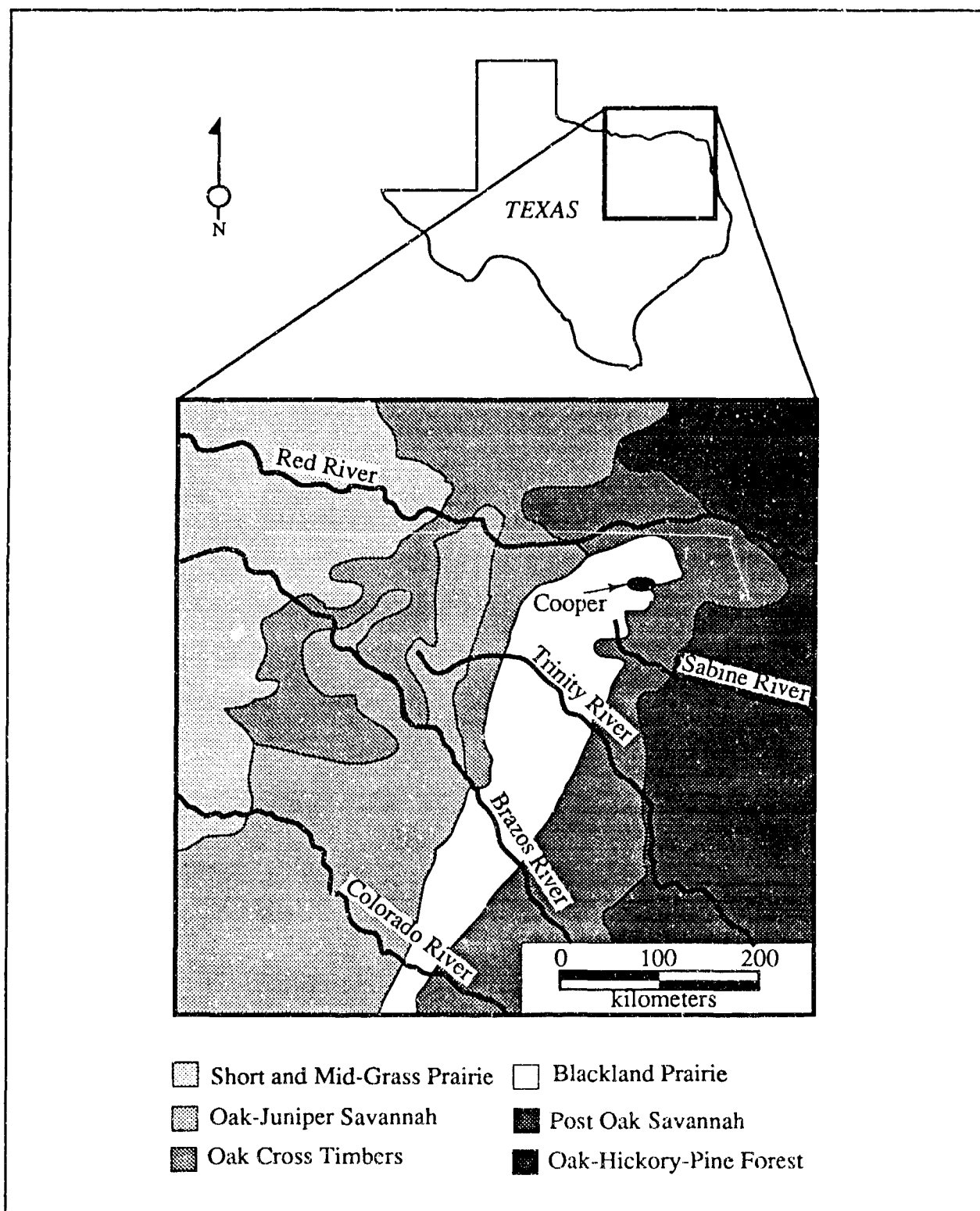


Figure 2-1. Biotic provinces in North Texas (after Küchler 1964). Note the location of Cooper Lake on the eastern boundary of the Blackland Prairie's northern extremity, where that province interfingers with the Post Oak Savannah.

communities which represent the major environments used by historic and prehistoric peoples. Each biome has, or had, distinctive fauna that were associated with these environments. These zones are also present in the Delivery Order Number 7 study area, but due to modern alterations to the environment, they cannot be mapped completely and do not represent the presettlement landscape and vegetation. Therefore, General Land Office (GLO) records and paleoenvironmental data are the only means of reconstructing the native vegetation. Descriptions of the past and present environmental zones located in the project area are presented below.

Topographically, the three major landforms represented in the Cooper Lake study area are uplands, slopes, and floodplains. Within the uplands, the Post Oak Forest, Post Oak Savannah, and Prairie vegetational communities can be defined based on the GLO evidence. Along slopes, the dominant ground cover was once hardwood forest, but these areas have been extensively cleared for agriculture. Within the floodplain along stream channels, hardwood forests and small pockets of seasonally inundated prairies were once present, but have been drained by channelization projects and cleared for agriculture.

The Texas GLO records provide information on the distributions of the prairie/forest boundary and the tree species composition of the presettlement landscape. These GLO files for the Cooper Lake study area were sampled in order to provide a baseline environmental model for the presettlement vegetation zones. As is noted in the Research Design formulated for the Cooper Lake project (Moir and Jurney 1988), the GLO records contrast markedly with the 1975 vegetational study of Cooper Lake conducted by Cleveland (1975). Since modern land-use practices have completely altered the presettlement vegetation communities, the GLO records comprise the major retrodictive method by which original plant communities can be reconstructed.

Table 2-1 lists the frequencies of tree species noted within the three major forested topographic settings of upland, slope, and floodplain (employing the direct gradient method) at Cooper Lake as well as those noted within the upland prairie, with its highly scattered saplings and trees.

In all, there are approximately 110 GLO tracts in the Cooper Lake project area, and the data in Table 2-1 were derived from 67 tracts within or adjacent to the reservoir. This sample consists of a total of 502 data points (i.e., land tract corners where "witness trees" were observed). In all, 42 (8.3%) fell in pure prairie areas and an additional 50 (9.9%) fell in prairie areas with dispersed trees.

TABLE 2-1

Frequencies of Tree Species within Major Topographic Zones at Cooper Lake

Tree Species	Upland	Slope	Floodplain Bottom	Prairie
Ash	—	7	39	3
Blackjack Oak	13	16	6	10
Bois d'Arc	—	—	6	—
Box Alder	—	—	—	1
Bur Oak	—	—	4	—
Cottonwood	—	—	1	—
Elm	—	12	47	11
Gum Bumelia	1	—	2	—
Hackberry	1	4	13	5
Hickory	8	29	18	4
Locust	—	—	1	2
Mulberry	—	—	1	—
Overcup Oak	—	1	4	—
Pecan	—	—	2	—
Post Oak	46	29	34	12
Red Oak	5	6	21	1
Red Haw	—	—	3	1
Spanish Oak	4	1	8	—
Walnut	—	1	1	—
Water Oak	2	—	21	—
Wild China	—	—	1	—
Willow	—	—	2	—
Total	80	106	235	50

SOURCE: General Land Office records.

ENVIRONMENTAL ZONES

Blackland Prairie

The Blackland Prairie environmental zone is associated with several geological strata including the Eagle Ford shale, Austin chalk, and Taylor marl, which have produced calcareous, clayey soils. These strata outcrop north of the South Sulphur River. To the south, the Eocene deposits of the Midway group have produced upland soils that are mostly dark, calcareous clays derived from the underlying clay, marl, shale, and chalky limestone and other bedrock materials. The low permeability and high shrink-swell capacity of Blackland clay soils have inhibited tree growth, except along streams and valley slopes.

The Blackland Prairie has been called a part of the Tall Grass Prairie (Blair 1950:100) and the True Prairie (Gould 1969:10). Little bluestem is the climax dominant along with big bluestem, Indian grass, switch grass, sideoats grama, hairy grama, eastern grama, tall dropseed, silver bluestem, and Texas wintergrass. A wide variety of *Compositae* and *Chenopodaceae* species are also found in this plant community.

Animal species which once frequented this environmental zone included bison, pronghorn antelope, white-tailed deer, prairie chicken, and predatory species such as wolves and coyotes. During the early historic period herds of horses and cattle competed with bison for forage, but wild animals were extirpated soon after settlement in the 1840s. The Delta County Centennial Publication (1970) reports that wild burros roamed the thick woodlands in Jernigans thicket and the dense floodplain forest at the confluence of the Middle Sulphur and South Sulphur rivers.

As noted above, 8% of the GLO sample of land tract corners fell in pure prairie plant communities, and trees were observed in an additional 9.9% of the land tract corners situated in prairie areas. These trees frequently were multiple-stemmed saplings. In all, 50 trees (10 species) were recorded in prairie areas.

The dominant species in prairie areas included post oak (24%), elm (22%), and blackjack oak (26%). Other tree species included hackberry (10%), hickory (8%), ash (6%), locust (4%), and red oak, box elder, and red haw (2%

each). Although these trees were highly dispersed, these data indicate the presence of mast producers and trees suitable for foraging by deer, antelope, and bison.

The modern vegetational study conducted by Cleveland (1975) indicates that hackberry has become the dominant species in all topographic zones as a result of historic alterations to tree species.

Post Oak Forest and Savannah

The Post Oak Forest vegetational zone is located along the periphery of the upland prairies. North of the South Sulphur River the interface between the two can be characterized as a savannah. The Post Oak Savannah north of the South Sulphur River fringes a broad upland prairie in Delta County. This area is characterized by pimple mound fields (see Chapter 6, this volume) and soils of the Freestone-Hicota. Crockett sandy loams and Wilson clay loams are also present. In our entire survey of this area, only very few discrete, low-density deposits of Uvalde veneer gravel were encountered north of the South Sulphur River.

The Post Oak Savannah consists primarily of post oak trees with a substantial grass understory. South of the South Sulphur River, the Post Oak Savannah grades into a true upland forest and Uvalde gravel are encountered frequently. Other tree species of the forest and savannah include blackjack oak, hickory, hackberry, and elm. Studies of overstory and understory vegetation indicate a species composition of over 63% post oak and 29% blackjack oak, and lesser proportions of big bluestem, Indian grass, sideoats grama, tall dropseed, and hairy grama (Dyksterhuis 1948; Marcy 1982:109). Although these studies are from the cross timbers located ca. 129 km (80 mi) west of Cooper Lake, they provide detailed data from the same latitude and a similar environmental setting, and are thus comparable to the study area.

The GLO records for the Post Oak (upland) Forest included 80 trees (eight species) which were located in this setting. The dominant species were post oak (57.5%) and blackjack oak (16.2%). Other incidental species included hickory (10%), red oak (6%), Spanish oak (5%), water oak (2.5%), and hackberry and gum bumelia (1%

each). The Post Oak Forest and Post Oak Savannah, although relatively limited in extent, provided a high proportion of the nuts most available for foraging animals (e.g., bear, deer, squirrels, etc.) and humans.

The Post Oak Forest and Savannah zone provided both nuts and grasses for human and animal forage. Animal species included white-tailed deer, raccoon, bear, wild turkey, cottontail rabbit, and squirrel. Some prairie species such as bison probably foraged in the savannah during periods of climatic stress or perturbations in migratory patterns.

Slope Forest

The forest composition at this vegetational zone is similar to that of the Post Oak Forest and Savannah. However, the gradient of this zone created a different set of soil conditions that produced a separate ecology from that of the Post Oak Forest. Grasses comprise less of the understory, and the forest cover is denser than the upland forest. Also, north-facing slopes, especially those along the valley wall south of the South Sulphur River, are characterized as mesic (i.e., marked by greater effective moisture than surrounding areas). Hickory trees and other species such as ash, hackberry, and elm are represented in higher percentages than in the Post Oak Forest and Savannah. This habitat was less productive than the Post Oak Savannah, but similar animal species were present.

The GLO data indicate that post oaks and hickories were the co-dominant species in the slope forest (see Table 2-1), each comprising 27.4% of all observed trees (referred to as "witness trees" in the field surveyor's notes). Ten tree species were noted. Blackjack oak (15.1%) and elm (11.3%) were of secondary importance. Other incidental species included ash (6.6%), red oak (5.7%), hackberry (3.8%), as well as overcup oak, Spanish oak, and walnut (0.9% each).

Floodplain Forest

All topographic areas falling within the floodplains of the South Sulphur River and its tributaries were characterized by a totally different environmental regime than the other vegetational

zones. The analysis of stream and river vegetation communities in the Cooper Lake area has not received great attention. Generally, the overstory consists of elm and hackberry with other associated species. A significant component of the floodplain forest, as indicated in the notes of the original land surveyors, was bois d'arc.

The economic importance of bois d'arc to prehistoric and historic peoples was substantial. The Caddo traded this wood to Plains groups for use as bows (Gregory 1973; Webb and Gregory 1978:19). Historic settlers found the wood ideal for fences, foundations, and even roadbeds. The species was cultivated for use in fences and foundation piers (Jurney 1988a:170-176, 1988b, 1988c:148), and its distribution was greatly expanded by the end of the nineteenth century (Jurney 1988b:176). Since the Floodplain Forest was relatively dense (except for small prairies), many grazing animals were not present. Bear and white-tailed deer were the dominant species.

The GLO sample from this vegetational zone comprised the largest number of species (21) and trees (235) in the Cooper Lake area (see Table 2-1). The dominant species were elm (20%), ash (16.6%), and post oak (14.5%). Other tree species which were of secondary importance include water oak and red oak (8.9% each), hickory (7.7%), and hackberry (5.5%). Incidental tree species included Spanish oak (3.4%); blackjack oak and bois d'arc (2.6% each); bur oak and overcup oak (1.7% each); red haw (1.3%); willow, gum bumelia, and pecan (0.9% each); and cottonwood, locust, mulberry, wild china, and walnut (0.5% each). The wide variety and concentration of fruit- and nut-bearing trees in the floodplain forest made this the richest environmental zone in the greater Cooper Lake area.

Floodplain Prairies

These areas are generally very small and are not shown on regional vegetation maps. Often these areas are shown as marshes on soil surveys and USGS maps. Areas that once contained floodplain prairies were seasonally inundated. No studies of the species composition of this vegetational zone are known for northeastern Texas. These areas were dominated by tall grasses, and served to attract waterfowl and

aquatic animal species. Since the South Sulphur River was channelized and a levee was constructed ca. 1914-1925, many of these small prairies have been destroyed and cultivated. During periods of intense flooding, these areas remain under standing water for several weeks. None of the GLO surveys (land tract corners) in the Cooper Lake area fell in a floodplain prairie setting.

Sloughs and River Channels

The South Sulphur River has an extremely broad, underfit floodplain. Relict channels and oxbows, or meander cutoffs, are common in the project area. Dominant tree species are primarily ash, hackberry, sycamore, and cottonwood. Although this environmental zone is rich in species diversity, the dominant nut-producing species such as overcup oak and pecan are relatively rare in its native state. Some pecan stands have been planted and cultivated during the Historic period.

The most-common animal species associated with sloughs and river channels include fish, turtles, and amphibians. Other animals include black bear, cougar, white-tailed deer, and smaller mammals such as opossum and raccoon, which were also present in the floodplain forest. These mammals were present in these areas because they were the primary sources of water, particularly during dry periods. All species from other vegetation zones needed this resource to survive.

PALEOENVIRONMENT

The paleoenvironmental reconstruction of the Upper Trinity River Basin presented by Ferring (1986) provides the most specific model of landscape evolution for northern Texas. Ferring (1986:98) reconstructed a series of fluvial aggradation-incision cycles from Elm Fork Trinity River, White Rock Creek, and the Trinity River, dating from ca. 70,000 B.P. to the present. This area is located ca. 129 km (80 mi) west of Cooper Lake, at the same latitude, and has undergone similar geological processes.

From 70,000 B.P. to 25,000 B.P. there was an apparent incision episode during the greater part of the Wisconsinan glaciation. During late Wisconsinan times, there was an aggradation-stability episode which lasted from ca.

25,000 B.P. to 20,000 B.P., followed by another incision episode from 20,000 B.P. to 15,000 B.P. Present finds of mammoth, mastodon, and other extinct fauna in base level stream gravel of the North Fork of the Sulphur River drainage appear to date to this period. This period was followed by another aggradation episode beginning at 15,000 B.P. and lasting to present times.

The reconstructed climatic trends for the last 1,800 years (adapted from Perttula et al. 1986:29-30) are shown in Figure 2-2. The data used for this reconstruction are derived from several studies along the Southern Plains periphery, and include the results of palynological, faunal, geomorphological, and archaeological investigations (Wendland and Bryson 1974; Wendland 1978; Albert 1981; Hall 1980; Reid and Artz 1984; Ferring 1982; Bruseth et al. 1987; Dillchay 1974). Significant contradictions exist in the data sets, most likely due to the specialized information contained in each reconstruction and the localized conditions of the various study areas. Also, the climatic regimes for each of these study areas are quite different. In addition, the spatial and chronological control for each data set is relatively poor. Modern studies of pollen rain, for example, indicate quite different patterns in similar environments. However, the studies listed above are the only data presently available for the Cooper Lake area, and taken together they point to major climatic fluctuations in similar environments and latitudes in northern Texas and southern Oklahoma.

A single pollen sequence for the study area is available from nearby Buck Creek Marsh (Holloway 1985). A single radiocarbon date of 1775 B.P. (A.D. 175) was obtained from the 80 cm (3.5 in) level of this marsh. Based primarily on supposition and comparison with better-dated contexts elsewhere in Texas, oak, pecan-hickory, and grass dominate between 1775 B.P. (A.D. 175) and 1300 B.P. (A.D. 650; Holloway 1985). By ca. 870 B.P. (A.D. 1100) pine pollen attains a high level and grass decreases, which is thought to represent the replacement of oak-hickory savannah by oak-pine forest.

Buck Creek Marsh was revisited as a part of a Southern Methodist University class project (Geology 5369) in 1987. The area that was collected previously (Holloway 1985) had been

A.D.	Climatic Episodes Southern Plains 1	Great Plains 2	Ferndale Bog Southcentral Oklahoma 3	Northeast Oklahoma Hall 4	Northeast Oklahoma Caney River 5	Southwest Oklahoma Delaware Canyon 6	Blackland Prairie 7	Southern Plains Bison Model 8
1800	Neo-Boreal	Cooler	Drier	Drier, increase in pine	Arid	Increased aridity	Increased aridity	Bison Present
1700			Increase in moisture					
1600								
1500	Pacific	Dry Droughty	Closed Forest					
1400			Drier					
1300								
1200	Neo-Atlantic	Warm, moist	Closed forest, more moisture	Moist	Climatic/ fluvial transistion	Moister	Decreased moisture	Bison absent
1100								
1000								
900	Scandic	Warmer			Decrease in available moisture	Drier	More mesic moisture	Bison present
800								
700								
600	Sub-Atlantic	Deterioration	Open forest	Drier, Oak Savannah	Increase in moisture	Moist		
500								
400								
300								
200								
100								
0								
Reference Legend 1 Wendland and Bryson (1974); 2 Wendland (1978); 3 Albert (1981);4 Hall (1980); 5 Reid and Artz (1984); 6 Ferring (1982); 7 Bruseth et al. (1987); 8 Dillehay (1974).								

Figure 2-2. Late Holocene environmental record from selected locales on the Southern plains periphery (adapted from Pertulla et al. 1986:29-30).

channelized extensively and was no longer suitable for palynological sampling. Instead, a more pristine locality ca. 3.2 km (2 mi) west of the previous location, still within Buck Creek Marsh, was visited, and a 1.5 m (4.9 ft) core was collected (Counce et al. 1987). A distinct peak of non-arboreal pollen was noted 70-110 cm (27.6-43.3 in) and 120-140 cm (47.2-55.1 in) below the

surface. Arboreal pollen peaked at the bottom of the column (150 cm; 59.1 in) and remained low until 50-60 cm (19.7-23.6 in), with the greatest proportion being 20 cm (7.9 in) below the surface. Dominant tree species include *Quercus* sp., *Pinus* spp., and *Salix* sp. Although no pollen or radiocarbon analyses were conducted, this project indicated that longer, more comprehensive cores

are present in other areas of Buck Creek Marsh. Further studies may improve the current pollen sequence.

Texas is one of the most drought-prone regions of the United States (Karl and Koscielney 1982; Diaz 1983; Stahle, Cleaveland, and Hehr 1988:59-74). Recently, nine climate-sensitive tree-ring chronologies derived from old-age stands of post oak trees were used to reconstruct the Palmer Drought Severity Index (PDSI; Palmer 1965) for the month of June in two large regions in northern and southern Texas, creating a chronology extending from 252 B.P. (A.D. 1698) to A.D. 1980 (Stahle, Cleaveland, and Hehr 1988:54-60). The June PDSI correlates to the season of maximum plant growth, and provides indirect measure of agricultural potential and potential annual biomass yield.

One of the most difficult problems in using proxy tree-ring paleoclimatic data is that only a

part of the tree-growth signal can be explained by climatic change. As noted above, the highest correlation between tree growth is with the PDSI and, to a lesser extent, streamflow and temperature. Due to microenvironmental factors, paleoclimatologists employing tree-ring data use regional networks to refine the climatic signals in reconstructions that are based on linear or multiple regression models (Anderson et al. 1990:4). Such models, when highly integrated and correlated, as they are in Texas (Stahle, Cleaveland, and Hehr 1988), have greater validity than single-site reconstructions. This statewide data is especially useful for the greater Cooper Lake study area, particularly as one of the chronologies used in the statewide study is from Red River County, ca. 80.5 km (50 mi) northeast of Cooper Lake.

The reconstructed PDSI for Texas (Figure 2-3) reveals that the most protracted periods of consecutive June drought since A.D. 1698

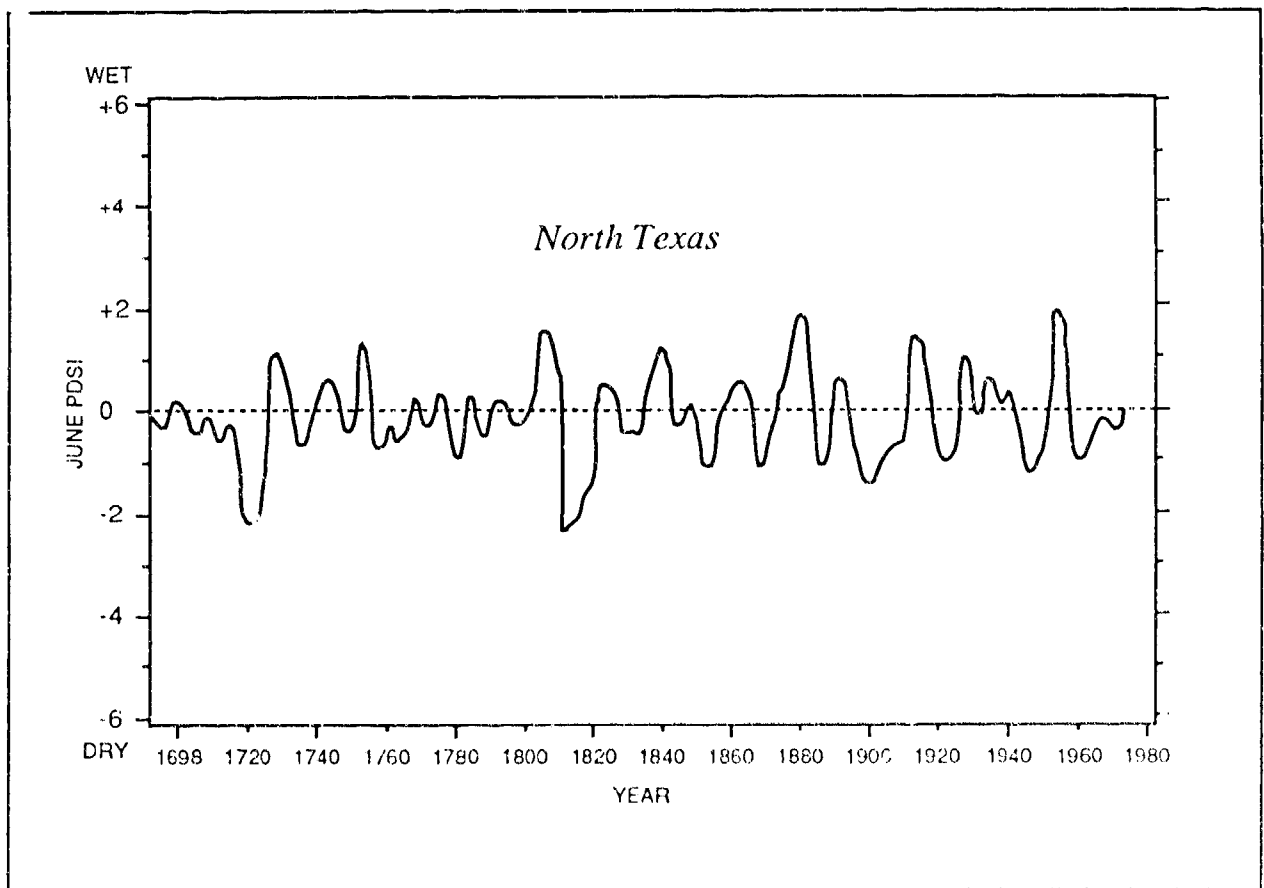


Figure 2-3. Variations in the June Palmer Drought Severity Index (PDSI) compiled for the period A.D. 1698-1980 (after Stahle and Cleaveland 1988:65, Figure 3).

occurred (in relative order of intensity) in 1951-1956, 1855-1864, and 1772-1781. At least eight other periods, each less than 10 years in duration, were also marked by severe drought oscillations (see Figure 2-3). These include the periods 1710-1715, 1728-1732, 1750-1758, 1788-1792, 1804-1807, 1818-1822, and 1890-1895.

Conversely, seven major and at least 10 minor periods were marked by above-normal PDSI. The wettest decade was A.D. 1791-1800, and most episodes of prolonged drought were preceded and/or followed by extended wet periods (Stahle, Cleaveland, and Hehr 1988:65-66). The present data base of tree-ring chronologies from around the Cooper Lake project area has been

examined for the potential to contribute to paleoenvironmental reconstructions (Cleaveland 1993). Since there are no pollen sequences for Cooper Lake, the tree-ring data are an important means of reconstructing local climate.

Based on the results of statistical reconnaissance of the relationship between available tree-ring chronologies in Texas, Oklahoma, and Arkansas, it is possible that long-term reconstruction of South Sulphur River discharge and divisional PDSI can be achieved for Cooper Lake (Cleaveland 1993:F1-F12). Figure 2-4 illustrates the stream flow for the South Sulphur River recorded at the gauging station below Big Creek. Peak flooding episodes occur in the spring to early summer, with 1945, 1957, 1966, 1967,

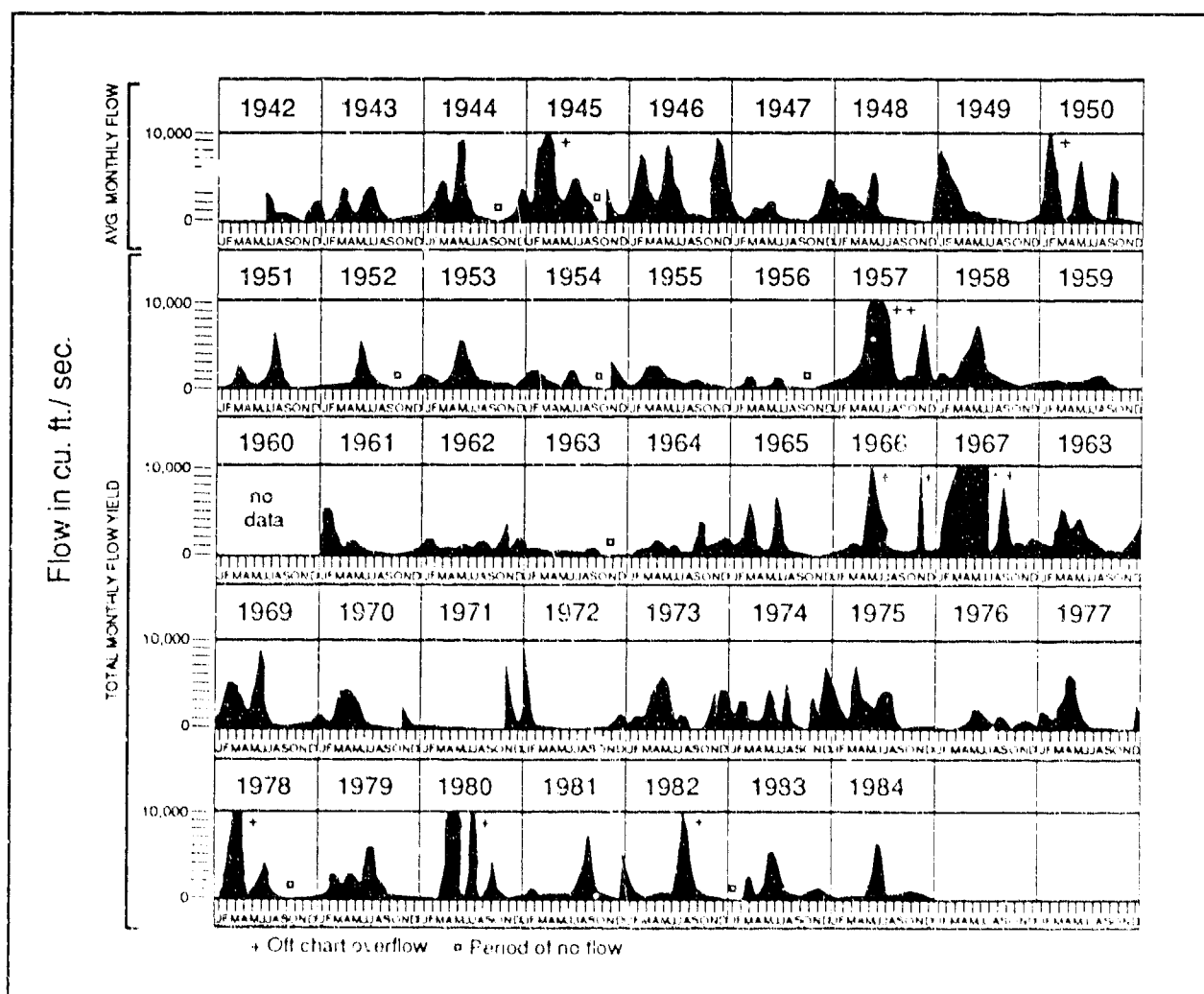


Figure 2-4. Stream flow for the South Sulphur River recorded at the gauging station below Big Creek.

1978, 1980, and 1982 experiencing the greatest flooding. During these episodes, the floodplain and floodplain-slope topographic zones were undoubtedly underwater. It is likely that the peak flooding and drought episodes can be reconstructed for Cooper Lake for the past 300 years using established tree-ring chronologies.

In addition to the correlation with the PDSI, post oaks in Texas contain a unique record of frost injury which correlates to the phenomenon of "false spring" (Stahle 1990). A regional reconstruction of the frost rings in post oaks from Texas, Oklahoma, Kansas, Missouri, and Arkansas has been completed for the period 1650-1980. Based on the timing of frost events to the twentieth century, the cold wave which eliminates false spring in Texas usually occurs during the first three weeks of March, severely damaging fruit and nut trees as well as early crops (Stahle 1990:77).

In Texas, such events are demonstrated for A.D. 1660, 1664, 1689, 1701, 1716, 1719, 1730, 1735, 1741, 1745, 1769, 1778, 1779, 1786, 1791, 1796, 1810, 1814, 1816, 1819, 1820, 1826, 1828, 1832, 1833, 1839, 1843, 1844, 1857, 1867, 1870 (one of the most intense and widespread), 1876,

1880, 1886, 1890, 1892, 1913, 1923, 1931, 1932, 1943, 1962, and 1965. Due to microenvironmental and atmospheric factors, not all collection sites in Texas contain evidence for all frost rings. Indeed, not all trees within a stand contain such evidence. This points to the need for regional networks of collection sites, particularly for the collection of historic wood from buildings and structures.

As noted above, the regional network employed in the reconstruction of Texas' climate is much more robust than single-site reconstructions. Also, since the native vegetation has received so many disturbances due to historic land-use practices, none of the modern trees within and adjacent to the reservoir are suitable for such analyses. Historic buildings, which were locally cut from the native forests, serve as repositories for ideal proxy climate information. Unfortunately, nearly all structures have been removed from Cooper Lake. However, a horizontal log building (e.g., the William Vaden House [1850]) adjacent to Cooper Lake and some timber-frame structural ruins within impact areas (e.g., 41HP143 [1876] and 41DT160 [1878]) have yielded tree-ring dates.

Previous Research

3

The earliest recorded investigation of Cooper Lake was the Moorman and Jelks Survey, conducted in 1951 (Moorman and Jelks 1952). This investigation identified 24 sites, most of which were within the reservoir project area as defined today. Avocational archaeologists then excavated burials at sites 41DT6 and 41DT16 in 1953 and 1956. The first systematic reevaluations of Cooper Lake archaeological sites were performed by the Texas Archaeological Salvage Project on eight sites in 1959, and two new sites were recorded at that time (Duffield 1959). No additional systematic surveys were performed. Most of the site information was derived from the collections of local individuals. These individuals have since passed away, and only partial collections (e.g., the Harper collection) have been preserved. Unfortunately, the notes and records as well as site locations from this time have not been preserved. Excavations at the Manton Miller site (41DT1) were directed by E. B. Jelks in 1959 and are reported in Johnson (1962). Mr. J. K. Long reported sites 41HP6 and 41HP7 in 1959, indicating the surge of local interest in the prehistory of Cooper Lake.

Only two projects were performed in the Cooper Lake area during the 1960s. The Dallas Archaeological Society excavated the L. O. Ray site (41DT21). The second known project, conducted by Bob Slaughter of the Department of

Geology at Southern Methodist University (SMU), involved geological and paleontological investigations of Cooper Lake and surrounding areas as well as field visits to several localities with potential archaeological significance.

The Archaeology Research Program of SMU performed three levels of investigations in the Cooper Lake study area from 1970 to 1976. The first to be initiated was a partial survey of unknown coverage, which is estimated (based on the distribution of recorded sites) to have encompassed less than 30% of the total reservoir area. This reconnaissance recorded 105 sites, 88 of which were newly identified (Hyatt and Skinner 1971). No historic sites were recorded, although historic components were present on some of the prehistoric sites.

Beyond this work, testing was performed at 30 sites, two of which (i.e., 41HP81 and 41HP87) were considered outside of the project boundaries at that time. Controlled surface collections were performed at two sites, and only two sites (i.e., 41DT37 and 41HP102) were excavated. For the other localities, the levels or intensity of testing varied from site to site. The SMU test excavations at Manton Miller (41DT1), for example, were less extensive than those conducted at either 41DT37 or 41HP102. Only seven new archaeological sites were recorded in the years following the initial survey, these being incidental discoveries that

coincided with the excavation phases of various SMU projects.

Previous studies at Cooper Lake generally have been unsystematic in terms of complete coverage of the landscape, particularly in the coverage of stream channels and the recording of historic properties. However, two recent exceptions are the survey, testing, and mitigation investigations of the dam axis construction zone performed by the University of North Texas (UNT) through a subcontract with Alan Plummer and Associates of Fort Worth in 1986-1987, and the survey, testing, and mitigation of the broader area of the embankment performed by SMU in 1987 (Moir, McGregor, and Jurney 1993). Both of these studies included surveys of stream banks and backwater sloughs, and used machinery to cut across fossil channels as well as to examine knolls and other landforms with a high potential to contain sites.

A series of reports (Perttula 1988a, 1988b, 1989a, 1989b) has been published for the UNT's work. A single UNT report on the relocation of the Tucker Cemetery (41DT104) has been published (Lebo 1988). Work conducted by SMU in the embankment segment of the Cooper lake project area under Delivery Order Numbers 2, 3, and 4 is reported in Moir, McGregor, and Jurney (1993). The archaeological survey conducted by SMU in a 1,885 ha (4,659 acre) portion of the project area under Delivery Order Number 6 is reported in Jurney and Bohlin (1993). In addition, geomorphological studies have been performed by Prewitt and Associates (Bousman, Collins, and Perttula 1988), and SMU (Ferring 1993). In total, an area of ca. 4,000 ha (10,000 acres) had been intensively investigated for geomorphological

and archaeological information prior to the Delivery Order Number 7 survey.

Some portions of the Cooper Lake study area have received additional archaeological investigation. Site 41HP158 was surveyed by McGregor and Roemer (1989). Portions of Survey Area 1 and Survey Area 2 in the Delivery Order Number 6 study area also were evaluated by Daniel McGregor (CE) and Ron Ralph of Texas Parks and Wildlife (TPWD) in December 1988. Also, some sites within the above-mentioned study areas which have received assessments by SMU (Moir, McGregor, and Jurney 1993) and by UNT (Perttula 1988a, 1988b, 1989a, 1989b) were reevaluated under Delivery Order Number 6, which included surveys of proposed TPWD parks (Jurney and Bohlin 1993). In addition, geomorphological studies have been performed for Finley Branch itself and other portions of the reservoir (Bousman, Collins, and Perttula 1988; Ferring 1993). These studies were used to augment the present geoarchaeological studies.

Figure 1-1 (see above) shows the Delivery Order Number 7 study area in relation to those portions of the entire Cooper Lake study area that have been intensively examined during the course of the above-listed archaeological investigations. Finally, some areas had not been included in all of the various work orders and these were pointed out to CE personnel. One 202 ha (500-acre) area was surveyed by Prewitt and Associates, Inc. under Contract No. DACW63-90-D-0008 (Bailey, Boyd, and Bousman 1991). However, a minor portion of the floodplain shown in Figure 1-1 still has not been systematically surveyed for all historic cultural resources.

Research Design

4

The survey and preliminary evaluation of sites in the 5,273 ha (13,030 acre) study area were performed following the stipulations of the Cooper Lake cultural resources Memorandum of Agreement (MOA; dated 1 December 1986), the guideline Scope of Work which serves as an attachment to the MOA, and the Research Design for Cooper Lake archaeological studies (Moir and Journey 1988). The specific details for this work were included in the scope of work for Delivery Order Number 7, revised 10 July 1989.

The investigations of the survey areas for Delivery Order Number 7 called for pedestrian survey of the entire study area, identification of archaeological sites, establishment of site boundaries, identifications of cultural components, and preliminary evaluation of all sites in terms of their archaeological integrity and potential National Register eligibility. All properties which have been given archaeological site status are discussed briefly in Chapter 8, Survey Results. The material culture remains noted or collected are also summarized. Archival and informant data, combined with the material culture evidence, have been used to establish preliminary evaluations of National Register eligibility for these properties under Criteria A, B, C, and D.

The overall research design for Cooper Lake guides the research within each separate delivery order issued by the U.S. Army Corps of Engineers

(CE). The primary emphasis of this research is to determine the National Register eligibility of individual properties and their historical context in the Sulphur River drainage. The research also sought to determine which properties may provide information that could address the research themes outlined in the Research Design (Moir and Journey 1988). These research themes include settlement patterning, environmental and ecological reconstruction, subsistence practices, and specialized analyses of prehistoric and historic material culture. Each property was evaluated for its potential to provide data pertinent to these themes. The Research Design was formulated several years prior to the completion of a full inventory of all cultural resources. By necessity, the research goals outlined in that document were formulated to be flexible in order to provide several avenues of research and consideration of National Register significance.

It has been shown that at least one Late Ceramic/Late Prehistoric site (41HP175) has been buried under a mantle of post-settlement alluvium in the South Sulphur River floodplain. This appears to be a short-term or single-component site which has not been subsequently occupied or disturbed by historic land modifications. This site stands in marked contrast to those studied in the 1950s and 1970s. Also, a Middle Archaic period site (41HP159) has now been identified. Such sites

have the potential to greatly expand our understanding of the prehistoric settlement and landscape evolution within Cooper Lake.

The following discussion presents the research topics and synthesizes some of the information that has been derived from all studies conducted to date. All sites recorded and evaluated in this report were examined for their potential to address these research questions and to fill gaps presently existing in the archaeological record. The research topics presented in the Cooper Lake Research Design (Moir and Journey 1988) for prehistoric and historic cultural resources evaluations and archaeological synthesis are discussed below.

PREHISTORIC RESEARCH TOPICS

Prehistoric Cultural Chronology

A synopsis of the research design and major research topics for the study area's prehistoric components, as well as a listing of known prehistoric sites with potential to address the research topics, are provided in Table 4-1.

The prehistoric cultural chronology research topic requires archaeological sites with clearly isolatable and datable components. The great majority of Cooper Lake sites represent many occupational spans over long periods of time and are located on landforms that have either aggraded little, have been maintained in balance, or have been deflated during the Holocene. Therefore, sites with definable and separable (i.e., stratified) components have the greatest potential to address the poorly understood prehistoric cultural chronology of the Cooper Basin.

Only one prehistoric site (41HP159) with substantial deposits located in an active depositional environment (the Finley Branch alluvial fan) has been identified with stratified components dating to the Middle and Late Archaic periods (Journey and Bohlin 1993). A Phase II evaluation employing more intensive and extensive excavations is presented in this report.

In their review of cultural resources investigations carried out at Cooper Lake over the last 40 years, Fields et al. (1991) note that 13 prehistoric sites have provided the vast bulk of the archaeological data base available from the Cooper

Lake area. Ten of these sites have undergone data recovery level investigations, although those investigations were of variable nature and extent, and the remaining three sites have been tested extensively.

Radiocarbon determinations and material culture evidence from this site sample indicate that Late Archaic or earlier occupations are present at the Spike (41DT16), Luna (41DT52), and Lawson (41HP78) sites and that these occupations are superimposed by more substantial, later occupations. Less-substantial evidence of Late Archaic or earlier occupations also has been identified at the Manton Miller (41DT1) and Hurricane Hill (41HP106) sites, and even less substantial evidence of an undifferentiated Archaic component is documented at the Doctors Creek site (41DT124). An additional undifferentiated Archaic component originally reported at the Cox site (41HP105) by Hyatt et al. (1974:57) and Hyatt and Doehner (1975:35) is believed by Fields et al. (1991) to be more probably of Woodland ascription. Woodland (or Early Ceramic) occupations are potentially present at the Tick (41DT6), Spike (41DT16), Ranger (41DT37), Luna (41DT52), Doctors Creek (41DT124), Lawson (41HP78), Arnold (41HP102), Cox (41HP105), and Hurricane Hill (41HP106) sites.

Two archaeological components which Fields et al. (1991:31) consider to be of possible Late Woodland or very early Caddoan period ascription are represented at site 41HP137. Undifferentiated Caddoan components have been noted at the Manton Miller (41DT1), Luna (41DT52) and Lawson (41HP78) sites. Early Caddoan occupations have been identified at the Thomas (41DT80), Doctors Creek (41DT124), and Arnold (41HP102) sites, while less-substantial components dating to this same period have been documented at the Tick (41DT6), Spike (41DT16), Cox (41HP105), and Hurricane Hill (41HP106) sites. The most-substantial evidence for a Middle Caddoan occupation among the sample of 13 sites is from the Hurricane Hill site (41HP106), although some evidence of occupations or components dating to this period has been obtained from the Tick (41DT6), Spike (41DT16), Luna (41DT52), Lawson (41HP78), and Cox (41HP105) sites. An occupation possibly dating to the middle or later portion of the Caddoan period is

TABLE 4-1

Synopsis of the Prehistoric Research Design for Cooper Lake,
by Major Research Topic

Cultural Chronology**Isolation and Dating of Components and Discrete Periods of Time.**

Sites with clearly defined components include 41HP159, Middle and Late Archaic; Early Ceramic or Woodland at 41DT124, 41HP106; Early Caddoan at 41DT80 and 41DT124; and Middle Caddoan at 41HP106 (Fields et al. 1991:23). An additional site, 41HP175, appears to date to the latter portion of the Late Prehistoric period and contains sealed components.

Settlement Patterning**Intrasite Patterning of Activities and Landscape Mobility at a Regional or Subregional Scale.**

The most substantial evidence for structures and related occupation areas has been recorded for 41HP102 and 41HP106, with substantial coverage of 41DT80 and 41DT124. Eleven sites (41DT6, 41DT16, 41DT37, 41DT52, 41DT80, 41DT124, 41HP78, 41HP102, 41HP105, 41HP106, and 41HP159) have extensive artifact assemblages and related geophysical information useful in studying regional or subregional settlement patterns (Fields et al. 1991:25). An additional site, 41HP175, completes this list.

Subsistence**Faunal and Floral Remains, Human Bioarchaeology, Food Processing, and Storage Strategies and Techniques.**

Ten sites (41DT6, 41DT16, 41DT37, 41DT52, 41DT80, 41DT124, 41HP78, 41HP102, 41HP105, and 41HP106) have the greatest yield of data relevant to subsistence (Fields et al. 1991:26). Also, site 41HP137 has yielded important information on cultigens (McGregor 1993).

Sociocultural Interaction**Lithic and Clay Raw Material Procurement, Regional Stylistic and Technological Patterns, and Bioarchaeological Comparisons.**

All 13 sites discussed above have the greatest potential of providing assemblages suitable for this analysis.

Paleoenvironmental Reconstruction**Ecological Baseline-Geomorphology.**

A basin-wide, five stage model derived from six geological sites was proposed by Bousman, Collins, and Pertulla (1988: 93-99). Ferring (1993) investigated the geological sequences at four sites (41DT118, 41DT124, 41DT126, and 41DT80) and Darwin, Ferring, and Ellwood (1990) performed resistivity profiling to 17.5 m below surface in the embankment study area. There is a lack of non-geological data that would be useful in paleoenvironmental reconstruction.

SOURCE: Moir and Jurney (1988).

preserved beneath 80 cm (31.5 in) of overburden at site 41HP175 (Jurney and Bohlin 1993), a locality which is not included in the site sample discussed by Fields et al. (1991). A definitive temporal/cultural ascription of that occupation, however, must await intensive excavations at the site.

These sites offer the greatest potential for separation of cultural components. However, as noted by Story (1990:305), past researchers have

had great difficulty in clearly defining discrete, isolatable, and datable cultural components in northeast Texas for all time periods. For instance, only eight thermoluminescence dates on pottery and a single archaeomagnetic date run by the University of Texas, Arlington, have provided absolute dates at Hurricane Hill (41HP106) ranging from A.D. 1020 \pm 120 to A.D. 1540 \pm 60 (Pertulla, personal communication 1989). Even though the Cooper Lake project provides one of

the largest assemblages of radiocarbon determinations in northeast Texas (Haas 1993), these dates are frequently from pit fill or secondary contexts, and firm component separation is lacking in many cases. As noted in Appendix B of this report, traditional typological and material culture studies have been overlooked in the development of the Cooper Lake cultural chronology.

Prehistoric Settlement Patterning

This research topic can be approached at two levels: (1) the intrasite patterning of activities at individual sites and (2) the patterning of functional site types on a regional scale. Cooper Lake is admittedly a restricted environmental zone and contains the remains of cultural influences from the Red River and East Texas as well as those of the populations indigenous to the Sulphur River Basin.

The levels of intensive excavations vary at most of the 12 sites discussed in the cultural chronology, but approximately 10-50% of the core archaeological deposits at Ranger (41DT37), Thomas (41DT80), Doctors Creek (41DT124), Arnold (41HP102), Cox (41HP105), Hurricane Hill (41HP106), and 41HP159 have been sampled. Only three sites, Thomas (41DT80), Arnold (41HP102) and Hurricane Hill (41HP106), which contain Early and Late Caddoan (41DT80), Early Caddoan (41HP102), and Middle Caddoan (41HP106) components, have provided evidence of hearths, patterned burials, structures, and activity areas that allow substantial reconstruction of their overall layout.

An examination of the environmental setting of these sites located in floodplain settings includes 41DT16, 41DT80, 41HP102, 41HP105, 41HP159, and 41HP175. Site 41DT124 is located adjacent to the floodplain. With the exception of site 41HP159, all of these localities have organically enriched deposits from human processing and disposal of food, plant, and faunal material. Sites 41DT6, 41DT52, and 41HP78 are located on residual knolls and have well-preserved midden deposits. The midden deposits identified on a fourth residual knoll site, Ranger (41DT37), are less well preserved due to slow aggradation or balanced deposition/erosion rates. A single upland

site, 41HP106, has rich organic cultural deposits. Furthermore, two dates of 130 ± 50 B.C. (SMU-1917) and A.D. 595 ± 50 (SMU-1966) on plant remains from Features 1 and 2, respectively, at upland site 41HP137 (McGregor 1993) indicate that evidence of horticulture and food processing may also be preserved in upland sites, although these deposits are sometimes truncated by erosion, plowing, or land modifications.

Prehistoric Subsistence

The study of subsistence is closely interwoven with settlement patterning studies. This topic involves the exploitation of various food resources not only within the upper Sulphur River Basin but also within adjacent regions. For instance, during periods of environmental stress, food shortages may have been ameliorated by shifts of residence outside of Cooper Lake, or through reciprocal exchange networks with other Red River Valley or East Texas groups who may have had food surpluses. Whatever movements bison herds may have made into the Cooper Lake area probably were due to deteriorating environmental conditions on the High Plains after ca. A.D. 1200, which may have made this resource more dependable and available to prehistoric peoples.

The levels of data recovery at Cooper Lake have accumulated substantial information in the following areas: (1) recovery and analysis of faunal and macrobotanical remains, partially by using flotation and fine screening; (2) bioarchaeological analysis of human (prehistoric and historic) skeletal remains; and (3) analysis of food storage facilities and food processing technologies.

Feature 1 at 41HP159 represents an excellent example of early food processing which may have been combined with heat treatment of local Ogallala quartzite. Fragments of a rind that have been tentatively identified as *Psoralea* sp. were recovered (see Appendix D). At site 41HP137, mentioned above, squash rind was recovered from a shallow, organically stained pit feature and a hearth.

Human remains have been recovered throughout the Cooper Lake study area since the 1950s. The analyses of these remains are varied, but recent studies of remains from the Doctors

Creek (41DT124) and Thomas (41DT80) sites indicate that considerable information can be derived from more substantial studies. For instance, several individuals at Thomas, and one juvenile in particular, exhibited severe and protracted stress during the weaning years. In addition, evidence of heavy work activity such as digging was present in an adult female (Burnett and Harmon 1993).

Evidence of subsistence practices at Cooper Lake indicates that hunting and gathering of local resources was the principal focus of activities from the Woodland or Early Ceramic through the Middle Caddoan periods. Also, horticultural activities, including the cultivation of tropical squash, are indicated at 41HP137 possibly as early as 130 ± 50 B.C. (SMU-1917; McGregor 1993).

Although the Sulphur River was known as the Bear River during the early Historic period, bear remains are essentially non-existent in the present collections, as are bison remains. Resident species such as white-tailed deer, rabbit, wild turkey, and raccoon comprise the primary remains in the faunal assemblage.

Hickory and acorn nut remains are the principal floral remains. The processing of hickory nuts is an almost ubiquitous feature of the existing floral database, although this may be an artifact of differential preservation.

A principal factor to be considered in the interpretation of subsistence is the comparability of samples. The work conducted by SMU under Delivery Order Numbers 4, 6, and 7 focused on the systematic screening and flotation of sediments from all cultural features and provides a statistically comparable data set. During the work conducted in the 1970s by SMU, however, fine screening was performed only on selected units. Unfortunately, sampling of selected excavation blocks and units provides only a representative sample of those areas. Thus, in order to obtain truly comparable, statistically valid floral data from the entire Cooper Lake area, systematically obtained floral samples would be required from all of the Cooper Lake sites. Also, as shown by the investigations at site 41HP137, this research should not be focused solely on midden rich sites in floodplains, but should also concentrate on upland localities.

Prehistoric Socio-Cultural Interaction

Cooper Lake is located in a forested peninsula which extends from the Post Oak Woodlands westward into the Blackland Prairie. The drainage divide to the north parallels the Red River. The drainage divides to the south are to the Sabine River headwaters, which flows through East Texas. This location potentially can provide information on inter-regional group mobility, foraging, and reciprocal exchange networks.

During the Cooper Lake investigations, Larry Banks and Skipper Scott of the U.S. Army Corps of Engineers (CE) have conducted source surveys for the Uvalde gravel and any other suitable lithic resources in the Cooper Lake area. Banks has examined most of the non-local cherts and quartzites in the Cooper Lake collections and many appear to have been derived from the Oklahoma geological formations (in the Jack Fork Valley) and from Red River gravel. The survey work conducted under Delivery Order Numbers 2, 6, and 7 indicates that the distribution of Uvalde gravel outcrops is very limited north of the South Sulphur River, which suggests that the prehistoric inhabitants of the Delivery Order Number 7 study area had relatively restricted access to the lithic raw material sources.

Ceramic studies in the Cooper Lake area have focused on basic typological description. These studies suggest interaction with groups who occupied major sites such as the Sanders site on the Red River and throughout East Texas. Additional studies on clay sourcing need to be completed to augment more-traditional approaches.

Prehistoric Research Design Summary

The cultural evolution model which serves as the basis for the culture history of the Cooper Lake project area suggests increasing social complexity, increasing population, and decreased group mobility through time. Since these factors are interrelated, no single causative force for cultural evolution (e.g., environmental stress or adaptation, population increase, or decreased territorial range) is sufficient to explain cultural change and/or continuity in the study area.

As will be discussed in the Historic Research Design Summary (see below), an economic model,

tied to increased population demands on the productivity of the landscape, is one plausible explanation for cultural change. A similar parallel has been proposed for prehistoric and historic hunter-gatherer subsistence, when shifts occur from natural resources that are nutritious and easily processed to ones that are less so (Asch et al. 1972). Cohen (1977) has proposed that the shift from hunting and gathering to agriculture can be viewed as an adaptation to population growth (i.e., internal as well as external to a given geographical area). Such growth ultimately requires the development of agriculture, which is a more-intensive form of land use and is more costly in terms of labor expended (Cohen 1977).

HISTORIC RESEARCH TOPICS

Historic Cultural Chronology

A synopsis of the research design and major research topics for the study area's historic components, as well as a listing of known historic sites with potential to address the research topics, are provided in Table 4-2.

The culture history of the Historic period is clearer than that of the Prehistoric period in terms of absolute dates for exploration, settlement, ethnic identity, and socioeconomic differentiation. However, site-specific historic data from Cooper Lake was generally lacking prior to the initiation of historic archaeological research in 1987. Archival research conducted by SMU under Delivery Order Numbers 4, 6, and 7 has involved tract-by-tract studies. These begin with the granting of the Public Domain through the Texas General Land Office; continue through deed transactions, tax surveys, and census records from 1850-present; and include ethnological surveys of ethnic enclaves, long-term residents, and knowledgeable citizens alive today.

The General Land Office patents provided information on the sequence of distribution of the Public Domain and served as initial points of reference for deed/title research. Although some land surveys were done in 1835 along the Red River and along the Caddo Trace south of Sulphur Springs in present-day Hopkins County, none were conducted in the Cooper Lake region at that time.

The earliest surveys in the Cooper Lake

vicinity were conducted in Hopkins County for Ulysses Aiguien and Francis Hopkins (heirs) in 1838 and for G. Birdwell in 1840. In 1841, tracts were surveyed in the Cedar Lakes area, which is in the vicinity of Cooper Lake, for Andrew Vaught, John Casker, and Montgomery Vaught. The next wave of surveying occurred in 1846 with surveys for John Nidever, Eli Lindley, and Augustus J. Butts, as well as for Samuel Perhue in 1847.

The third wave of surveying occurred with the Thomas Trent, J. J. Nidever, and James Franks surveys in 1852; the Jose Zunega Survey in 1853; the Hardin Wright, Zephriah Dawson, and Henry Doughty surveys in 1854; the Hopkins County School Land Survey in 1855; the Wilson W. Langham Survey in 1856; and the T. F. McKinney and S. W. Williams surveys in 1858.

The fourth wave of Public Land Allocation occurred with the Alexander Sinclair and Elinder Spencer surveys in 1860; the Samuel McCulloch Survey in 1862; the Randolph D. Spain Survey in 1863; and the Randolph D. Spain (heirs) and Robert Carson surveys in 1866. There was a brief hiatus until the Randolph D. Spain and Henry Dinthelle surveys in 1870; the Henry L. Ward (heirs) and George C. Wetmore (heirs) surveys in 1872; and the Felix G. Ewing and additional Rudolph D. Spain (heirs) surveys in 1874. The last survey on file in this sample was John T. Sinclair in 1889, the tract within which historic cemetery 41DT105 (erroneously named the "Sinclair Cemetery") is located (Winchell, Rose, and Moir 1992).

Each historic site within the Cooper Lake project area was visited and evaluated. Those sites clearly older than 50 years were evaluated for National Register eligibility and their potential to address the questions outlined in the Research Design. The full archival searches for each land tract were matched against the archaeological record at each recorded historic site to determine the length of occupation, socioeconomic status, and ethnicity. Informants were taken on field trips through the project area to identify all events and residents that they could recall.

The resulting culture history indicates that although local lore suggests settlement in the 1820s, the first archaeologically evident wave of settlement/exploration in the project area dates to

TABLE 4-2

Synopsis of The Historic Research Design for Cooper Lake,
by Major Research Topic

Cultural Chronology**Frontier and Post-Frontier Immigration: Upper South—Lower South—Midwestern.**

Cultural geographers in Texas have identified distinctive cultural attributes in architecture, cemetery practices, and lifeways (Jordan 1967, 1970, 1978; Jordan, Bean, and Holmes 1984) that influenced the initial frontier settlement of Texas. Subsequently, during the frontier agricultural expansion of the late nineteenth and early twentieth centuries, the American mosaic of cultural influences is less clear-cut. Sites which could yield information relevant to initial settlement include 41DT97, 41DT113, 41DT118, 41DT126, 41HP142, and 41DP143. Sites with significant post-frontier occupations include 41DT126 and 41DT154.

Settlement Patterning**Intrasite Features and Refuse, Farmsteads, and Communities.**

Initial settlement in Cooper Lake focused on the distribution of the Public Domain. Many of the sites identified in the archaeological record are located on soils and landforms conducive to yeoman farming practices (e.g., 41DT97, 41DT113, and 41DT118). During the post-frontier period, many farms operated by non-resident landowners were actually farmed by tenants (41HP142 and 41HP143). Cemeteries were important for residential families. Small, kin-based cemeteries and larger church or community cemeteries are present. Schools and churches were located within the Delivery Order Number 7 study area. Light industries (brick clamps or kilns, syrup mills, and wood) are present as well.

Subsistence**Yeoman Farmers, Animals, Row Crops, Cotton, Socioeconomic Status.**

The Cooper Lake area is located in a region which was remote from any major urban markets during the frontier wave of settlement. Farming strategies prior to the railroad were diversified, primarily husbandry and row crops. Cash cotton became a dominant farming strategy after the railroad provided closer market access. Sites with information relating to subsistence include 41DT97, 41DT113, and 41DT118.

Socioeconomic Interaction**Native American, Euro-American, and African American; Landowner and Tenant**

Frontier America was settled by a diverse range of races and ethnic groups. Some settlers preferred to be on the front wave of settlement, while others waited for improved transportation and economic development before moving west. In the late nineteenth century and early twentieth century, agrarian society was highly mobile, both within a subregion and interregionally. Sites which can yield data relevant to this include 41DT97, 41DT113, 41DT118, and 41DT126.

SOURCE: Moir and Journey (1988).

the 1850s. Several initial farmsteads have been intensively excavated (e.g., 41DT97, 41DT113, 41DT118, and 41DT126). During the 1870s-1880s, population increased in Cooper Lake and many of the early farmsteads were abandoned in favor of larger homes. This period also saw the inception of local industries such as brick kilns,

sawmills, sorghum presses, and gins. No gins have been reported or recorded in Cooper Lake, and any other full-scale industries are totally absent.

At the turn of the century, churches and incipient community centers with schools and cemeteries formed near Klondike, Cooper,

Peerless, and Addran. Many of the historic sites associated with these communities have been recorded in the project area.

The social and economic turmoil of the Great Depression and the preceding decade greatly altered the historic landscape of Cooper Lake. The Delta/Hopkins County Levee District began surveys in 1914-1915 and constructed levee and drainage systems into the 1920s, opening bottomland for cotton cultivation. Informants report that many small landowners went into debt to support levee construction, and these bonded lands were bought up by nonresident landowners who initiated a system of tenant farming.

During the depression, the Works Progress Administration and U.S. Department of Agriculture (Home Extension and Soil Conservation Services) began to survey individual land tracts and farms. These records were filed with county clerks, and many have been lost or destroyed. However, the files for ca. 40% of the Cooper Lake study area were recovered. Saunders (1993) presents this information for all tracts in the embankment area. The files for the remaining area have been filed and accessioned for reference on many historic properties within the entire Cooper Lake area. These records provide deed/title claims, dates of purchases or inheritance, and dates of building construction that have aided in the reconstruction of the culture history at recorded historic sites.

Historic Settlement Patterning

A general model of early Anglo-American settlement (i.e., pre-1887), based on the cultural dichotomy of the Upper South (Kentucky, Tennessee, Missouri, etc.) and the Lower South (Georgia, Alabama, Mississippi, Louisiana, etc.), was proposed by Moir and Jurney (1988:46) as the principal ethnic grouping to be expected on the Texas Frontier. Cultural geographers have correlated specific customs, architecture, and social practices for these two broad culture regions (Kniffen 1965; Kniffen and Glassie 1966; Glassie 1965, 1968; Jordan 1978; Jordan et al. 1984). The Native American and African American settlement routes principally followed the same broad diffusion 30-40 years earlier. African Americans, both escaped slaves hiding among Indians and

Spanish and slaves of early Texas plantation owners, came from the Lower South. Certain groups such as the Choctaw moved at the same latitude westward. On the other hand, the traditional splinter group of the Cherokee led by the Bowl moved from Tennessee in the 1790s to Spanish Missouri to the Arkansas Cherokee Grant, and eventually to Texas in 1819. The Kickapoo came from the Great Lakes and the Lenape came from Delaware.

Anglo-American settlers in northeast Texas also arrived from a number of sources. Some settled from the Mid-Atlantic States (e.g., Dawson, Pennsylvania) and others from the Midwest. A principal point in this discussion is that Texas settlers, according to the decadal census records, often resided in several states prior to their enumeration in Texas. This phenomenon is due in part to the movement of the frontier from east to west. Many agrarian frontiersmen simply "pulled up stakes" and followed the wilderness. The lure of Texas was the vast amount of available land.

Frontier settlers sought light arable soils where effort for clearance was minimal. In the Cooper Lake area, the Crockett loam sites in the Post Oak Savannah were selected since the soil could be tilled by a single farmer and team.

Once the available Public Domain had been depleted in the 1870s, those settlers who remained in the region began to form nuclear communities. Often, early cemeteries reflect the close association of several farmssteads, as may have been the case with site 41DT105 (Winchell, Rose, and Moir 1992:171). Apparently, some farms were abandoned when the families moved to a better house on presently established roads, such as the second Sinclair house (41DT125) on the Jefferson-Bonham Road which passed through the center of Cooper Lake.

The advent of the railroad in the 1880s radically altered settlement in the Cooper Lake area. Roads were improved, cotton gins were established along rail lines, and the number of tenant-operated farms increased. This trend continued into the twentieth century. The WPA surveys indicate that the dwelling construction peaked in the 1910-1930 period. The vast majority of historic sites which have been recorded in Cooper Lake date to this period.

Historic Subsistence

The historic household forms the integral element of analysis for all historic investigations, particularly in a rural setting. As the focal point of the historic farmstead and all its activities, the household is where material culture is most abundant and indicative of changes through time. Rural community and industrial sites, on the other hand, despite their importance and potential significance in the historical record of a given area, typically offer a fairly limited range of material culture (i.e., usually bricks, wood, glass, and other constructional debris) from which equally limited inferences may be drawn to fill gaps in the archaeological record.

All historic sites that have received National Register evaluation or intensive data recovery have yielded information on subsistence. This includes direct evidence in the form of floral and faunal remains, as well as indirect evidence in the form of stonewares, storage vessels, utensils, etc.

The frontier agricultural strategy focused principally on livestock husbandry with a subsistence agriculture. As Jordan (1978) notes, the Delta/Hopkins County area is an economic zone far removed from market access, where the product must be shipped over long distances. The purchase of manufactured foods was minimal prior to the advent of the railroad. All farmsteads in Cooper Lake dating from the 1850s-1870s contain evidence of this self-sufficiency.

From the 1870s-1920s, market access improved and farm subsistence shifted. Cotton production shifted the focus to a cash-based economy, although pork and beef continued to be produced and processed at the household level. Garden vegetables and row crops also continued to be produced and consumed at the household level.

In the 1930s, the U.S. Government implemented a number of home and farm improvement programs that accelerated changes in subsistence strategies. One of the prime intents of these programs was to augment cash cropping with home food production. As noted in WPA files, most of the farms in Cooper Lake were poor cotton producers (0.10-0.20 bale/ha; 0.25-0.5 bale/acre) and nearly all farmers used gardens to supplement their diet and economy.

After World War II, the rural family farm became a less viable entity. The farming generations of the late nineteenth and early twentieth centuries passed away and subsequent generations traveled to urban areas for employment. Those few families who maintained their economic ties with the land turned to the purchase of groceries and foodstuffs rather than the self-production of food.

Historic Sociocultural Interaction

This historic research domain has been discussed in the Cooper Lake research conducted to date and in the Research Design (Moir and Jurney 1988), but has received little archaeological attention. This is due primarily to the localized distribution of African American residences and the focus of recent archaeological studies in the embankment area, where Anglo-American residences are predominant. Although some African American occupations are known from the embankment area, these were usually less than 50 years old.

Bioanthropological studies of the nineteenth-century cemetery at site 41DT105 suggest that four of the 16 individuals interred there have genetic characteristics suggesting either Native American, Asian, or Mestizo heritage (Winchell, Rose, and Moir 1992:172). The low numbers of "Mongoloid traits" exhibited by these individuals, however, derogates their confident ascription to any of these population groups. There is also tenuous archaeological evidence for historic Native American occupation at the Robert Hannah site (41DT126). Informant Flora Blandon (see Chapter 7, this volume) is reported to have been a Native American from Mississippi who, along with her husband Warren and other freed slaves, moved from Mississippi to the Klondike area.

As indicated by this information, there is a contradiction in the sociocultural integration of the Cooper Lake area. Whites and non-whites apparently lived in adjacent, exclusive communities. The tenuous indication of some degree of ethnic integration provided by bioarchaeological and ethnohistorical data, however, points to the need for further archaeological, ethnological, and historical study.

Historic Research Design Summary

The evolution of historic societies, from a culture ecological perspective, is tied not only to environmental productivity and stress, but also to changes in the global economy which resulted from technological innovations. Frontier subsistence strategies employed the least labor-intensive methods, due to the technology available and cost/product efficiency. As noted above, animal husbandry was the most effective agricultural strategy until the advent of the railroad. With the invention of the steel plow in the 1870s, and the railroad distribution of this machine, a new technology became available at a relatively low cost and with a high productivity rate, particularly since the raw prairies could then be cultivated.

Agricultural practices of the initial frontier settler parallel those of swidden agriculturalists, who abandon their plots as yields decline and weeds encroach. This strategy was practical as long as land was available locally and new plots could be established, but many frontiersmen simply moved on. As increasing intensity in agricultural use of the land is brought about by labor investment that is disproportionately greater than the returns received (Boserup 1965:15-16), new choices must be made for a successful farming strategy. Through such factors as increasing land preparation, fertilization, and irrigation (as well as fighting insect pests, blights, and climatic perturbations), the human labor per unit of agricultural output rises throughout this sequence (Boserup 1981:45). Expanding population inevitably strains each successive form of land use, forcing a shift to the next one, so that productivity of labor inevitably declines (Tainter 1988:94). This pattern is evident in the historical and archaeological record at Cooper Lake.

PALEOENVIRONMENTAL RECONSTRUCTION

A crucial variable necessary for a full and accurate paleoenvironmental reconstruction is the definition of the native ecosystem, and definition of the changes wrought by historic settlement. The first level of research is a firm understanding of the vegetation identified during the General Land Office surveys (see Chapter 2, this volume). Dendrochronological studies, including the dating of wooden structural ruins in and adjacent to Cooper Lake, have provided valuable proxy climatic information. Cleaveland (1993) employed the ca. 300-year living and historic chronologies available for the Cooper Lake area in an examination of the correlation between 40 years of stream flow and the Palmer Drought Severity Index (PDSI). This study was conducted under the terms of Delivery Order Number 4. More detailed reconstruction of the PDSI and stream flow for the 300 years of dendrochronological records was not within the scope of the present research.

The historic tree-ring chronologies compiled for the Cooper Lake area provide firm evidence that dendrochronology is a cost-effective and accurate method of climatic reconstruction. Additional historic buildings have been sampled for tree-ring materials, and a reliable, historic chronology useful for dating any historic wooden materials is now available for Cooper Lake.

The above data will aid in the development of an accurate, integrated environmental model for the past 300 years. Data relevant to longer reconstructions may be obtained from both non-archaeological and prehistoric sites. Primary data include geomorphological analyses and the relatively low-resolution but important data from floral and faunal assemblages (particularly at 41HP159, where at least 5,000 years may potentially be reconstructed).

Methodology

5

SURVEY METHODS

During the Fall and Winter of 1989, Archaeology Research Program (ARP) personnel conducted a walkover survey and subsurface investigation in the unsurveyed portions of Cooper Lake under the terms of Delivery Order Number 7. All archaeological sites were noted and those over 50 years of age were recorded and received preliminary evaluations of their National Register significance. The goal of this survey was to document and identify all cultural resources greater than 50 years in age. The primary and secondary impacts to these resources were identified and the significance of each resource was assessed in terms of National Register criteria A, B, C, and D.

The 1936 WPA Tax Surveys allowed the definition of areas which had the highest settlement at that time in the early twentieth century. This also provided data on landowner/tenant relationships, farm size, and agricultural strategies and yields. Local informants were used to identify past occupants of some properties for which further documentary evidence was ambiguous or missing (see Chapter 7, this volume). Further archival studies added to the historic overviews compiled by previous researchers.

The survey methodology consisted of pedestrian reconnaissance, with teams of field

personnel examining the ground surface along parallel transects spaced at 20 m (65.6 ft) intervals. In areas where there was extensive ground cover, shovel tests (screened by shovel or hand) were used to determine whether archaeological remains were present. Likely areas for buried sites were sampled with the aid of a backhoe, with visual examination of trench walls and back dirt. Backhoe excavations were used to provide exposures across the entire project area for geomorphological examination, and to penetrate the post-settlement alluvium mantle along the floodplain margin. Field personnel trained in the standard description of soil profiles provided gross characterization of the sediments in all backhoe trenches.

All archaeological sites were evaluated primarily as to their degree of integrity based on surface visibility, and secondarily, on landform or soil association. If sites were extremely eroded, less than 50 years of age, or consisted of aboveground features, shovel tests were limited to the placement of datums that usually measured 35 cm (13.8 in) wide and up to 35 cm (13.8 in) in depth, depending on the point at which culturally sterile sediments were encountered. Auger tests and accessory shovel tests were used to confirm information derived from the placement of datums at historic sites greater than 50 years of age. Those sites which were clearly less than 50 years

old, based on surface artifacts, features, and structural remains, were not subjected to formal test excavations. Prehistoric sites or historic sites with prehistoric components received shovel and auger tests in addition to the examination of datum excavations. Sites composed of surficial veneers of cultural materials on eroded landforms received detailed surface examination. If surface exposure was adequate to evaluate site extent, then a minimal degree of subsurface testing (screening all soil) was employed. If deep or dense archaeological deposits were present, then mapping controls were established. Features and excavation units were then mapped via transit, and an arbitrary elevation datum was established.

TESTING METHODS

Pedestrian reconnaissance of the study area was augmented by invasive subsurface testing methods which were selected on the basis of their suitability to specific topographic and geomorphological conditions. Generally, minimal subsurface testing was conducted in the study area's upland settings, which have been extensively altered and diminished by historic settlement, agricultural practices, and erosion (see Chapter 6, this volume). Subsurface testing via backhoe was employed most intensively in the study area's floodplain and floodplain margin settings (as per scope of work for Delivery Order Number 7), which have been shown to be covered by mantles of post-settlement alluvium ranging ca. 35-100 cm (1.1-3.3 ft) in thickness (Bousnian, Collins, and Pertulla 1988; Ferring 1993).

Systematic backhoe and/or shovel excavations also were employed in selected areas to test specific landforms displaying high potential for site discovery and low surface visibility. These areas and landforms generally included floodplain knolls or rises, the toes of slopes, and interfaces between the slope and upland physiographic zones (for a description of the physiographic zones employed in the geomorphological study see Chapter 6, this volume). Specific areas and landforms that were tested include floodplain knolls or rises and remnant uplands on Lost Ridge and in the Doctors Creek drainage (see Chapter 6, this volume) as well as a broad isolated rise within the Honey Creek Valley, east of Friendship. Systematic

shovel probe testing of these landforms resulted in the discovery and boundary definition of several prehistoric sites (e.g., 41DT179, 41DT182, 41DT227, 41DT228, and 41DT229; see Chapter 8, this volume). Additionally, the systematic shovel testing of several sites investigated within the project area (i.e., 41HP77, 41HP182, 41DT6, 41DT143, 41DT161, 41DT172, 41DT173, and 41DT176) extended well beyond the limits of those sites to examine associated slope and floodplain areas that were determined to have high potential for site discovery (see Chapter 8, this volume).

In all, 221 backhoe trenches were excavated during the fieldwork for Delivery Order Number 7. These were used in the discovery of buried sites (testing of floodplain apron), the definition of site extent and structure, and the interpretation of local geomorphology (see Chapter 6, this volume). Backhoe testing was conducted at a total of 14 sites, nine of which were identified during the Delivery Order Number 7 fieldwork. In all, approximately 400,000 m³ of sediments were excavated. Screening of the excavated soil matrix was limited to discovered or known sites, as per the scope of work for Delivery Order Number 7.

Shovel testing, in addition to being used in walkover survey and testing of topographic settings with high potential for occupation, also was employed as a supplement to machine-assisted deep testing in order to determine whether deposits were present at shallower depths. If cultural materials were encountered in probes at these loci, additional shovel test probes were excavated at ca. 20 m (66 ft) intervals from the last artifact observed. All excavated soils and sediments were defined in the field according to texture, apparent composition, friability, degree of compaction, and color.

All previously recorded sites within these survey areas were revisited in order to update site information, particularly the current site condition. A maximum of one person day was specified by Delivery Order Number 7 in the search for each site, unless the site was known to have been completely destroyed by construction (DACW63-87-D-0017, C.B.9). At all newly recorded and relocated sites a permanent datum was established and recorded on the site map. These units were usually shovel tests (35 cm x 35

cm; 13.8 in x 13.8 in) which were screened for artifacts, unless other screened test units were used to evaluate the site.

A complete photographic record was kept of all recorded sites. Both black-and-white and color 35 mm photographs were taken. Damage produced by vandalism, construction, or earth disturbances was documented in addition to two viewpoints of the site. Structural ruins were also documented, showing significant architectural details. However, all buildings noted were either in ruin, collapsed, or simply composed of sets of remains such as structural piers.

The scope of work for Delivery Order Number 7 specified that the goal of testing was not to reach what may be termed "major data recovery." This methodology was stipulated in Sections 4B-C of contract DACW63-87-D-0017. The survey-level testing was not expected to resolve National Register eligibility in all cases. For sites of potential National Register quality, the appropriate goal for this level of methodology was to identify sites as clearly eligible or not eligible for the National Register and to document very accurate boundaries for all sites. At sites where soil profiles could not be observed in trench walls, gully walls, or erosional features, the depths of deposits were determined using soil probes, soil augers, or shovel tests.

Historic sites with clearly defined surface boundaries (e.g., structural evidence) received minimal testing that was usually limited to the screened datums. These sites usually displayed well or cistern depressions, piers and chimney falls, outbuilding and fence remains, 80-100% ground surface visibility, and planted ornamental vegetation which clearly defined yardscapes. Archival researches and informant interviews (see below) were performed for the entire project area, and specific information was derived for some, but not all properties. Those properties for which the former occupants were not identified were, for the most part, the residences of non-landowning tenants.

Known archaeological sites received additional testing. If surface exposure was adequate, then a minimal degree of subsurface testing (screening all soil) was employed. If deep or dense archaeological deposits were present, then

systematic grids were established. Features and excavation units were then mapped via transit and an arbitrary elevation datum was established.

FINLEY BRANCH FAN DEEP TESTING

The Delivery Order Number 7 work supplemented the previous Delivery Order Number 6 work with further backhoe trenching at site 41HP159 along Finley Branch, an area to be impacted by construction of the North Texas Municipal Water District's Water Intake Facility. In this area a large trackhoe was used to open deep trenches along the artificial channel of Finley Branch (Delivery Order Number 6). Under Delivery Order Number 7, additional backhoe trenches and controlled 1 m x 1 m (3.3 ft x 3.3 ft) excavation units were excavated to further define the site.

1991 LITHIC ARTIFACT ANALYSIS

Flaked stone artifacts from six sites (i.e., 41HP76, 41HP159, 41DT21, 41DT177, 41DT162, and 41DT247) reinvestigated in 1991 were analyzed and are reported along with their respective site descriptions in Chapter 8. Each flaked stone artifact was individually examined. Preliminary sorting was conducted to separate the artifacts into five major groups based primarily on a series of technological attributes.

The major analytical categories are: (1) cores, (2) bifaces, (3) projectile points, (4) specialized implements, and (5) debitage. Each of these major categories is further subdivided by lithic raw material type and placed into technomorphological categories and subcategories (or "types") based upon discrete technological, morphological, or functional attributes following Crabtree (1972) and Callahan (1979).

The general system employed by A. T. Boldurian (1990), specifically the classification of unmodified debitage, is used in the analysis of Cooper Lake Delivery Order 7 flaked stone assemblages. The categories employed in the analysis of the six flaked stone assemblages are described below.

Cores and Core Fragments

Cores are pieces of lithic raw material ranging from totally unprepared parent material and specimens with few negative flake scars to those that bear numerous negative flake scars and established striking platforms. Cortex may or may not be present, depending on the specimen's stage of reduction. Cores are classified on the basis of flake removal patterns, the number and nature of platform areas, and the amount of cortex retained. Flake removal direction can be unidirectional, bidirectional, or multidirectional.

Two major core type categories have been established for analytical purposes: unprepared or "opportunistic" cores (for arbitrary and unsystematic flake removal) and prepared cores (for systematic production of flakes and blades). Opportunistic cores are usually amorphous or of unstandardized shape, with multidirectional flake removal patterns. Prepared cores usually have systematic flake removal patterns oriented in unidirectional or bidirectional fashion. They invariably demonstrate some evidence of routine platform preparation and the establishment of one, or a few, main striking platforms.

Bifaces and Biface Fragments

This category includes all worked/formed flaked stone implements other than projectile points that were bifacially flaked along one or more margins. Bifaces can be produced from either large or small flake blanks, core blanks, or core fragments. Bifaces are identified according to various stages of the reduction process.

Unmodified Debitage

This category includes complete and fragmentary byproducts or waste materials of primary and secondary lithic reduction. Flake attributes are directly related to the morphology of the parent mass from which they were removed and the technology employed in their removal. Thus, determination of a specific flake's technological type (i.e., reduction technology and stage) is based on attributes of the parent mass which will be reflected by the reduction debitage.

For example, primary reduction debitage is distinguished from later stages by the presence of a large amount of cortex, large size and thickness, and a general lack of platform preparation. Secondary and tertiary reduction debitage typically show a decrease in the amount of preserved cortex accompanied by a decrease in overall size and thickness, and a general increase in platform preparation.

Core reduction debitage and biface reduction debitage are typically distinguished by the angle and shape of the platform remnant, the configuration of negative flake scars on the dorsal surface, and the general shape and thickness of the longitudinal cross section of the flake. Core reduction debitage generally shows a platform remnant that, when viewed in longitudinal cross section, forms a 90° angle with the dorsal surface of the flake. The platform remnant also is generally flat. Core reduction debitage tends to show parallel or bidirectional negative flake scars and a flat or rectangular longitudinal section.

Biface reduction debitage generally shows a platform remnant that, when viewed in longitudinal cross section, forms a 45° angle with the dorsal surface of the flake. The platform remnant is generally faceted and is triangular or curved in transverse cross section. Biface reduction debitage tends to show converging negative flake scars and a thin, curved longitudinal cross section.

Projectile Points and Projectile Point Fragments

Included here are all complete and fragmentary specimens that are unifacially or bifacially modified to facilitate hafting as spear, lance, dart, or arrow points. Not all of these specimens were used as projectile points, however. The shape of some points combined with preliminary edge-wear studies suggest a number of other possible cutting, slicing, piercing, and/or drilling usages.

Multiple functions among so-called "projectile" points have been demonstrated in studies conducted, for example, by S. Ahler (1971) at Rodgers Shelter, Missouri.

Specialized Implements

The miscellaneous specialized implements from the study area include formed tools with a specialized, often asymmetrical or amorphous shape which are unifacially or bifacially modified along all or part of one or more margins. They are made on flake blanks, blades, core blanks, or core fragments of various sizes. The intentional modification of artifacts in this class categorizes the class as secondary technology and suggests that tools of this type should be treated as curated implements. Specialized implement subcategories are defined on the basis of the type of blank used and the location, direction, and extent of modification.

Non-Diagnostic Shatter

Specimens from this final category of unmodified debitage have unstandardized, amorphous configurations and are characterized by the absence of a distinct point of initiation (i.e., platform remnant) or point of termination (Bucy 1974). Non-diagnostic shatter, defined here as the by-product of core reduction that "flies off" during the flaking operation, can occur during all stages of core reduction, biface manufacture, and the maintenance of worked/formed implements.

ARCHIVAL AND INFORMANT RESEARCH

The scope of work for further archival research under the terms of Delivery Order Number 7 specified that general historical information be compiled for all unsurveyed project areas. All historical summaries and materials compiled under other previous work orders and contracts were reviewed. The population censuses, agricultural censuses, tax rolls, county court minutes, and probate records were examined at Sulphur Springs (Hopkins County) and Cooper (Delta County). A major series of 1936 surveys, performed by the U.S. Department of Agriculture and the Works Progress Administration, was uncovered in both the Delta County and Hopkins County courthouses. These were individual land tract surveys that were performed for all farms. Unfortunately, the curation of these records varies

and several within Cooper Lake were damaged (illegible), destroyed, or missing.

Other regional archives included the Real Estate Division of the U.S. Army Corps of Engineers, the DeGolyer Library of Southern Methodist University, the Dallas Public Library, and the Barker Library in Austin. The Archives of the Texas General Land Office also provided primary information on original land grants.

Informant interviews were conducted with local historians (e.g., John Banks, Doug Albright, Christine Ray) and citizens who have resided in the area for a considerable time. Also, an interview with Skipper Steely, of Paris, Texas, was conducted to develop a broader understanding of the history of the region. Mr. Steely kindly reviewed the previous archival research conducted at Cooper Lake (Saunders 1993) and provided information on broader settlement trends and historic events that affected the region. Individuals who were interviewed include Mr. and Mrs. Boyd Glossup, Mr. Kenneth Cockrum, Mrs. Velma Shaw, Mrs. Marie Jones Crawford, and Mr. Harland Craig. These individuals provided details on general historic trends and events as well as specific historical information for some recorded properties.

CURATION METHODS

Inventory Lists

Three different inventories were compiled for the Cooper Lake materials. First, an inventory was made of all artifacts which are the property of the U.S. Army Corps of Engineers (CE) and which currently reside at SMU. The inventory list was produced in two forms. The first list was sorted by storage location and the second by project and year. Both of these original inventory lists were used during the reanalysis stage to assist with reboxing and consolidating artifacts by site. These lists were updated as reanalysis progressed to produce the final inventory list and submitted to the CE. A second inventory made of all materials to be used for the reanalysis of old Cooper artifacts was also submitted to the CE. This listing contained only those artifacts which were used to gather additional information.

The last type of inventory list contained all

materials which were not turned over to the Institute for the Study of Earth and Man (ISEM) for curation. This includes the human remains which were turned over to the CE (as specified by Delivery Order Number 5, a letter of transmittal is filed with the inventory lists), materials which were not curated (i.e., soil samples that were collected and are to be disposed of), and any other materials which were destroyed or misplaced during processing.

The inventory lists, both computer data copy and hard copy, are filed with the CE and SMU/ISEM Collections Management/Research Center curation facility. The inventory lists were provided to the CE as the inventory deliverables requested by Delivery Order Number 7.

Artifacts

Artifacts collected in the 1980s were reboxed to maximize the use of space and future research potential of the Cooper Lake collection. Artifacts were placed in cardboard containers measuring 21 in x 21 in x 3 in (0.77 ft³) with a telescoping top and bottom, and constructed of 200 lb-test corrugated pasteboard. Smaller chipboard boxes were placed in these larger boxes to organize the artifacts. The standard large box was used for both bulk and diagnostic materials storage. The individual artifacts were placed in 3 mil zip-loc bags with acid free card-stock labels inside each bag.

Materials were collapsed from individual boxes for levels to individual boxes for units when doing so resulted in the consolidation of space required to store the materials. All bag and box labels were checked for completeness and quality. When necessary, old labels were replaced with new, clearly readable ones.

In addition, all diagnostic artifacts were segregated and packed together by site and unit. The result was that a box, or several boxes, of projectile points were ordered by county, site, and unit and all placed in one location. This allows easy access to diagnostics by future researchers. Diagnostic artifacts include: projectile points, all ceramics, vessel glass, bone, and flotation debris. All other material remains and bulk debris is boxed by site.

All boxes were given a unique box number.

These box numbers were recorded on the inventory list to allow easy identification of a specific box.

Site Forms

Site forms for all Cooper Lake sites were completed and filed in alphanumeric order based on their TARK numbers. Site forms for sites that did not receive TARK numbers were filed together in order of their temporary SMU site designation. Each site form, complete with map, has been placed in a 1/3 cut, tabbed manilla folder. The tab was labeled in ink with the site's TARK number. In addition to the three complete sets of site forms submitted to the CE (the CE submitted forms to TARK), three complete set of site forms are filed at SMU. In addition, one set of the forms will be filed in manilla folders with SMU's master site file and two sets will be spiral-bound. One of the spiral-bound sets is filed with the Cooper Lake documents and the other in the ARP Library.

Field Notes and Forms

Field notes and excavation forms are organized by site, unit, and level and placed in notebooks. Where appropriate, forms from earlier work are filed with forms from later work at the same site. Dividers are clearly labeled and placed in an appropriate location in the notebooks. The spine of each notebook includes pertinent information about the binder's contents.

Photographic Material

Roll Film

Cut roll film negatives in strips of four to six frames each are filed in 8 1/2 x 11 mylar notebook pages. Each page is labeled with field roll and frame number, site, date, etc. The pages are organized in field number order. The notebook contains a data sheet with documentation for each image recorded. This inventory contains the date of photograph, field number (i.e., roll and frame), provenience, subject, photographer's full name, and camera settings. General information describing the film type and camera type, etc., is included for each roll of film.

Slides

Slides are marked in pencil on the upper right-hand corner (non-emulsion side) of the slide mount with the field number. The slides are placed in mylar 8½ x 11 notebook pages in field number order and organized in notebooks. The notebook contains a data sheet with documentation for each image recorded. This inventory includes the date of photograph, field number (i.e., roll and frame), provenience, subject, photographer's full name, and camera settings. General information describing the film type and camera type, etc., is included for each roll of film.

Prints

Prints are marked with the corresponding negative and field numbers using a soft lead pencil along the upper right-hand edge of the non-image side of the print. The prints are filed in 8½ x 11 mylar notebook pages and placed in notebooks.

Each photographic notebook contains a data sheet with documentation for each image recorded. This inventory includes the date of photograph, field number, provenience, subject, photographer's full name, and camera settings. General information describing the film type and camera type, etc., is included for each roll of film. Old Cooper Lake photographic materials have been reorganized and incorporated by site into new photographic materials, where appropriate. The spine of each notebook includes pertinent information about the binder's contents.

Computer Files

Both hard copies and magnetic media copies of all computerized information have been provided for curation and to the CE. Computerized information includes all inventory lists, coded data from analyzed artifacts, and written reports. Data files as magnetic media will be made available on 5¼ in double-sided, double density, PC-formatted disks. Spreadsheet data

files will be in a form readable by Dbase III and word processing files will be text-only ASCII files. The original Apple Macintosh 3½ in double-sided, double-density disk copies of all data will remain on file with ARP. Additional file format types can be provided should they be needed for other computer systems.

Microfiche

Coded data, data coding templates, field notes, etc. will be microfilmed. The microfilm will be reproduced as microfiche sheets and submitted for curation and provided with copies of the final report.

Other Project Documentation

All other project documentation, notes, archival information, maps, USGS maps, daily logs, odd- and over-sized resource materials, and reports (published and unpublished) have been clearly labeled and organized for curation. Where appropriate, these forms of information have been organized in binders. All binders and compact documentation are filed for storage in labeled boxes. An inventory list of each box's contents has been placed inside each box.

REPOSITORY SERVICES

A formal notice of Intent to Provide Repository Services has been agreed upon by the ISEM Collections Management/Research Center at SMU and CE. A signed letter of intent is on file with both agencies. The above-mentioned inventory lists have been submitted to CE as a list of materials recommended for curation. Written approval from the CE for implementation of curation will be received when analysis is complete and the final report submitted. Upon receipt of written approval the materials will be transferred to the ISEM Research Center for curation. A receipt and inventory of materials accepted shall be sent to the CE.

Geomorphic Investigations of Finley Branch and the Upper Portions of Cooper Lake

David H. Journey, Raymond Buyce,
and S. Christopher Caran

6

INTRODUCTION

A total of 221 backhoe trenches were excavated within the Delivery Order Number 7 study area to assess regions with a high probability of containing deeply buried sites, to interpret the geomorphology of those areas, and to aid description of site stratigraphy and factors influencing site formation. The field methods employed in this phase of the Delivery Order Number 7 investigations are described in Chapter 5, Methodology. The soil profile descriptions generated in this study were based on field identifications of soil color, structure, and texture made by project personnel trained by Dr. Rolfe Mandel and chapter co-author S. C. Caran. All field observations compiled and reported as part of this study were reviewed by Mandel and Caran.

The sediment and soil profiles observed in the Delivery Order Number 7 study area provide a general overview of the sediment stacking within this portion of Cooper Lake. Not surprisingly, the profiles indicate considerable variation in soil color and texture within some physiographic areas, while other areas exhibit remarkably uniform sediment and soil profiles.

The general areas of investigation described here include the Finley Branch fan between sites 41HP159 and 41HP162; the Merrit Creek drainage; the South Sulphur River floodplain and

floodplain apron areas extending from the Emblem Bottom to Merrit Creek and those below Big Creek downstream from the dam site; the Middle Sulphur River; Jernigan Creek; Johns Creek; and Doctors Creek (Figure 6-1, Table 6-1). Each investigated area was divided into a maximum of five physiographic zones (i.e., stream channels, floodplains, floodplain rises, slopes, and uplands) as delimited on U.S.G.S. topographic quadrangle maps on file with the Fort Worth U.S. Army Corps of Engineers (CE) and the Archaeology Research Program, Southern Methodist University.

Backhoe trenches excavated within the Finley Branch were located in a sediment package defined as an alluvial fan, and were distributed primarily outside of the natural course of Finley Branch. Deep testing within the Merrit Creek segment of the study area focussed on areas along the channel of that creek in the floodplain and the floodplain/slope interface. The South Sulphur River study area segment, extending from the Emblem Bottom to the Merrit Creek basin, is composed of a relatively abrupt interface between floodplain, slope, and upland areas (collectively referred to in this chapter as the Emblem to Merrit Escarpment), and includes the steepest slopes in the Delivery Order Number 7 study area. Investigations within this study area segment were concentrated on the floodplain and floodplain/slope physiographic zones.

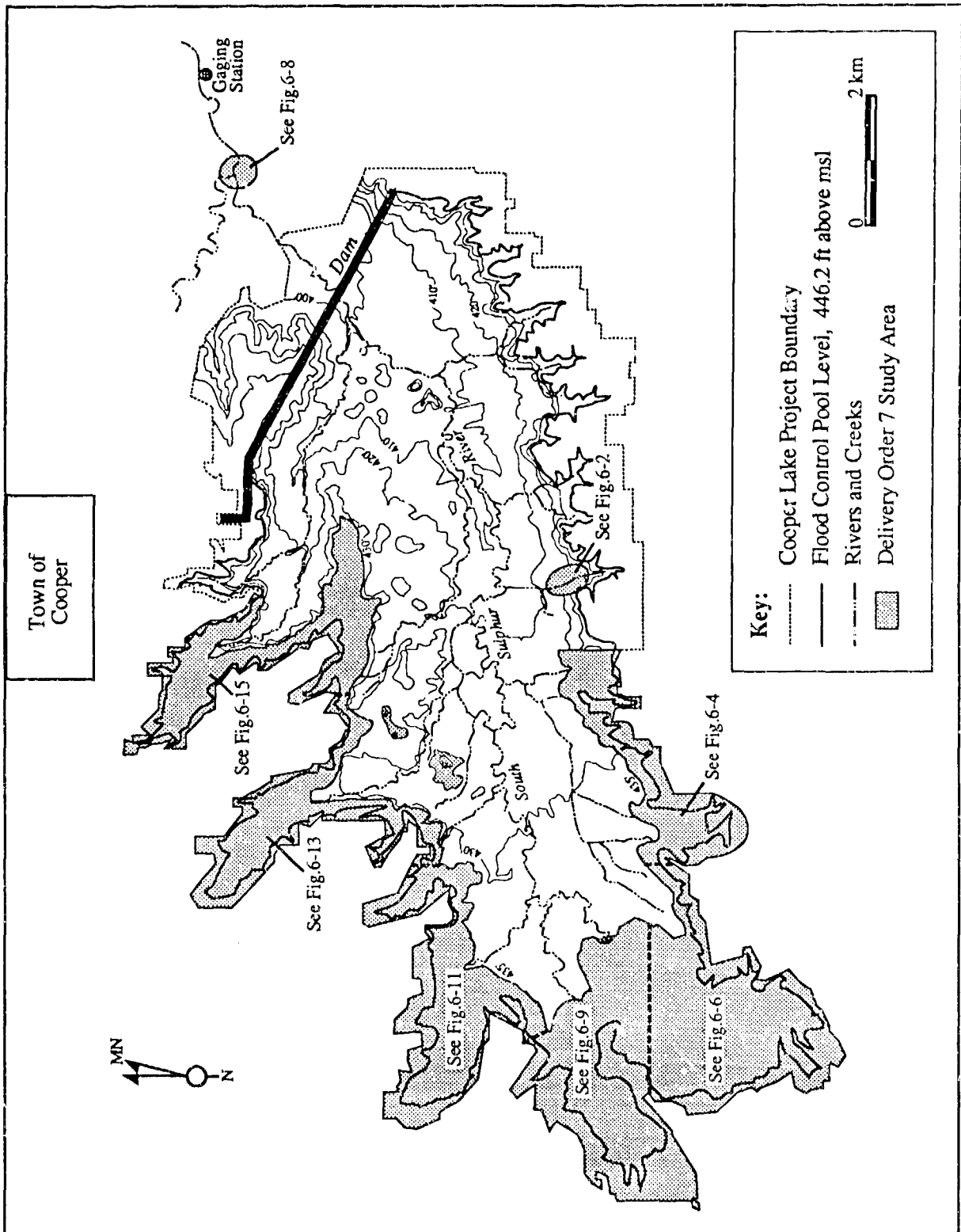


Figure 6-1. The Cooper Lake Delivery Order Number 7 study area, Delta and Hopkins counties, Texas, showing the locations of project segments.

TABLE 6-1

Summary of Deep Testing via Backhoe in the Delivery Order Number 7 Study Area,
by Drainage and Physiographic Zone

Location	Sites (n)	BHTs (n)	Stream Channel	Floodplain	Floodplain Rises	Floodplain/ Slope	Slope/ Upland	Upland
Finley Branch Fan								
Site 41HP159	1	8	—	—	—	8	—	—
Site 41HP162	1	7	—	—	—	7	—	—
Merrit Creek	3	50	10	33	—	7	—	—
South Sulphur River	2	40	4	15	—	21	—	—
Middle Sulphur River	3	31	16	13	2	—	—	—
Lost Ridge	—	8	—	3	—	5	—	—
Jernigan Creek	—	8	2	5	—	—	—	1
Johns Creek	2	38	—	20	2	3	13	—
Doctors Creek	2	31	2	12	16	—	1	—
TOTAL	14	221	34	101	20	51	14	1

Deep-tested areas in the Middle Sulphur River study area segment were comprised mainly of channel/floodplain zones. Also included within this study area segment is Lost Ridge, a truncated upland remnant between the South and Middle Sulphur river channels which received backhoe trenches in its constituent floodplain and floodplain/slope physiographic zones. Deep testing investigations within the Jernigan, Johns, and Doctors creeks study area segments were focused in the channel/floodplain and slope physiographic zones, with only very limited upland deep testing. The results of hand excavations conducted on a series of isolated rises east of Friendship between Honey and Johns creeks are presented in Chapter 8, this volume.

The results of the deep testing program carried out under Delivery Order Number 7 are described below by study area segment (i.e., drainage; see Figure 6-1) and physiographic zone within each segment. The data obtained in the field

are then compared to mapped soil series (Lane 1977; Ressel 1979) and to profiles along Doctors Creek described by Ferring (1993). A brief discussion of sites identified and/or investigated during deep testing is also provided (a more extensive treatment of these localities is provided in Chapter 8). The results of the field conference convened in 1989 as part of the Delivery Order Number 7 investigations are discussed, and the chapter concludes with a brief overview of the deep testing results.

It should be emphasized that this chapter is primarily concerned with the *geomorphic* results the Delivery Order Number 7 deep testing program and, as such, it primarily discusses excavations that were culturally sterile. Descriptions of backhoe trench profiles and their respective cultural associations for newly identified and/or investigated archaeological sites are presented in Chapter 8, this volume.

RESULTS BY STUDY AREA SEGMENT

Finley Branch: 41HP159 and 41HP162

A total of 15 backhoe trenches were excavated in the Finley Branch alluvial fan, within and adjacent to site 41HP159 and within the area defined as site 41HP162, to determine whether subsurface cultural materials were present on the margins of and between the two sites (Figure 6-2, Table 6-2). The principal focus of this work was to define the limits of site 41HP159 and determine the site's relationship to the earlier course (or paleochannel) of Finley Branch.

Archaeological site 41HP159 is a stratified, possibly multicomponent occupation site encompassing at least two buried, well-preserved hearths consisting of scattered fire-cracked rock with associated diagnostic (but poorly dated) Middle to Late Archaic dart points. The importance of this site is principally related to its unique combination of: (1) Kent and Yarbrough points, for which there is no complete radiocarbon chronology; (2) intact hearths, at least one of which contained charcoal at the time of the excavation; and (3) sedimentary overburden with an incipient soil development which postdates the Archaic occupation. The age of charcoal samples from one of the hearths (Feature 1) was 5576 ± 114 yr B.P. or 3626 ± 114 B.C. (SMU-2222 dendrocalibrated; Jurney and Bohlin 1993).

Site 41HP159 is especially important because it preserves a clearly defined occupational history during the Middle Archaic/Middle Holocene, a cultural period and time which is comparatively poorly known in this region. The paleoenvironmental evidence of this period is also lacking primarily because no suitable deposits for long-term environmental reconstruction, such as bogs, have been found in Cooper Lake. Loss of other suitable environments for sites of this kind may have resulted from the channelization of the South Sulphur River ca. 1914-1925, which changed former depositional environments along its course to surfaces of net erosion.

Although an adequate assessment of the full significance of 41HP159 has yet to be made, preliminary investigations indicate potential for important new information about a variety of geomorphic processes and environments of

deposition. Paleoenvironmental interpretation is hindered by poor floral and pollen preservation in this setting, primarily due to the lack of swampy areas at the locus now and in the past.

The geomorphic setting of this site is a low aggradational bench (terrace) on a small alluvial fan complex deposited by overbank sheet wash and by streams (including the ancestral Finley Branch). It is partially incised by the present Finley Branch, a low-order intermittent tributary of the South Sulphur River. Site 41HP159 lies between the original channel of Finley Branch and an artificial drainage channel excavated ca. 1914-1925. The artificial channel and a series of backhoe and trackhoe trenches excavated at the site exposed several discrete stratigraphic units with weakly developed soils. Initial investigations near the site by Bousman, Collins, and Pertulla (1988) established a preliminary lithostratigraphic framework for the deposits at 41HP159. Subsequent detailed studies by Mandel (1993), including descriptions of three soil profiles with supporting textural analyses, have demonstrated the potential for geomorphic assessment of landscape evolution in the site vicinity and in settings of this type throughout the project area.

Rolfe Mandel was the last individual to study in detail the site's geomorphology and stratigraphy, employing sample collection, analysis, and data interpretation. Chapter co-author S. C. Caran visited the site on two occasions to perform geomorphic and stratigraphic reconnaissance. One of the visits was as part of a field conference involving researchers who had previous experience in the Cooper Lake area (see below), including C. B. Bousman, R. Mandel (mentioned above), and C. R. Ferring (who investigated Doctor's Creek and vicinity). A mitigative strategy for the assessment of the cultural resources was devised from these reconnaissance visits and submitted to the Corps of Engineers (CE). The subsequent research was performed by Prewitt and Associates, Inc., under contract DACW63-90-D-0088, and is reported in Gadus et al. (1992:25-32, Appendix A)

Stratigraphy

The soil profile obtained from BHT 4, excavated within the limits of site 41HP162,

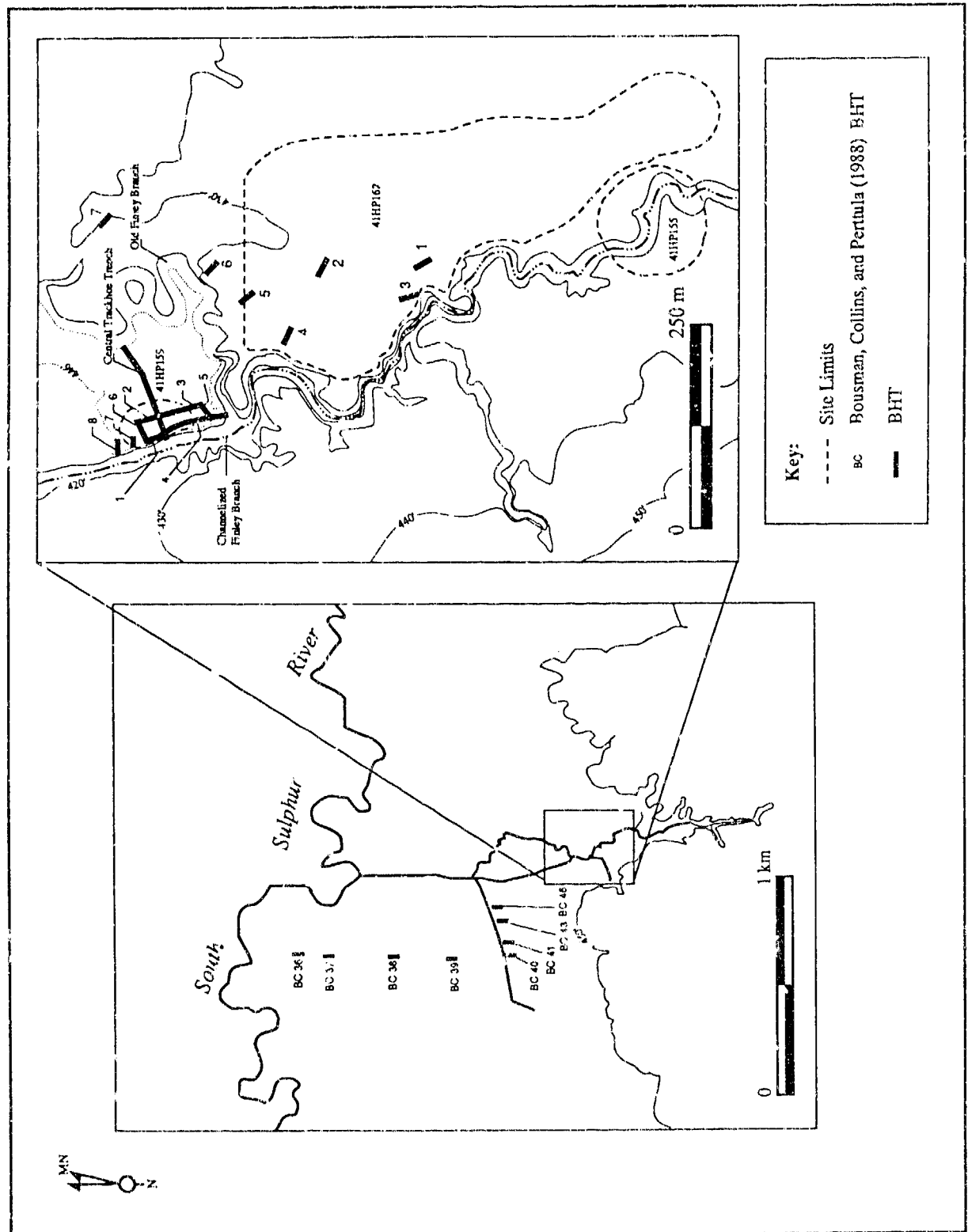


Figure 6-2. Locations of backhoe trenches excavated in the Finley Branch segment of the Cooper Lake Delivery Order Number 7 study area, Delta County, Texas.

TABLE 6-2

Backhoe Trenches Excavated within the Floodplain/Slope Zone
of the Finley Branch Fan, Sites 41HP159 and 41HP162

Site BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
41HP159					
1	18.00	0.70	0.30	Backdirt	—
			0.48	SL	10YR6/3
			0.60	CSL	10YR4/2; 10YR7/3 mottles
			1.00	CSL	10YR3/1
			1.40	CSL	10YR3/3; 7.5YR4/6 mottles
2	16.00	0.70	0.10	SL	10YR6/4
			0.22	SL	10YR7/3
			0.38	CSL	10YR7/3; 10YR5/4 mottles
			1.00	CSL	10YR3/3; 7.5YR4/6 mottles
3	27.50	0.70	0.18	SL	10YR6/3
			0.80	CSL	10YR3/1
			1.00	CSL	7.5YR4/4
4	47.00	0.70	0.05	Humus	
			0.10	SL	10YR6/3
			0.41	CSL	10YR3/1
			0.90	CSL	10YR3/4
			1.20	CSL	10YR5/6
5	11.50	0.70	0.08	SL	10YR6/3
			0.40	CSL	10YR3/1
			1.00	CSL	10YR3/3; 10YR4/3 mottles
6	11.00	0.70	0.10	S	5YR5/1
			0.17	S	10YR7/2
			0.35	CSL	10YR3/4; 10YR6/4 mottles
			1.00	CSL	10YR4/3
7	11.00	0.70	0.50	CLL	10YR4/1; 2.5Y6/4 mottles
			2.50	CLL	2.5Y6/4; 10YR4/1 mottles
8	10.00	0.70	0.30	SL	10YR7/3
			1.30	CLL	10YR4/1; 2.5Y5/4 mottles
			2.50	CLL	10YR4/1; 7.5YR5/8 mottles
41HP162					
1	6.40	0.70	0.40	CSL	10YR4/1; 2.5Y5/4 mottles
			1.10	CSL	2.5Y5/4; 10YR4/1 mottles
			2.00	CSL	2.5Y5/4; 10YR6/1 mottles

TABLE 6-2 (cont.)

Site BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
2	5.30	0.70	0.30	CSL	2.5Y5/4; 10YR4/1 mottles
			2.10	CSL	2.5Y5/4; 10YR6/1 mottles
3	8.40	0.70	1.50	CSL	2.5Y5/4; 10YR4/1 mottles
			2.10	CSL	2.5Y5/4; 10YR6/1 mottles
4	5.40	0.70	1.80	L	2.5Y6/4; 10YR4/1 mottles
5	5.50	0.70	0.30	L	10YR4/1
			1.20	L	2.5Y5/4; 10YR4/1 mottles
			2.10	L	2.5Y6/4; 2.5Y6/0 mottles
6	5.60	0.70	0.25	CSL	2.5Y5/4
			1.50	CSL	2.5Y5/4; 10YR4/1 mottles
			2.00	CLL	2.5Y5/4 5YR5/8 mottles
7	6.00	0.70	0.57	CSL	2.5Y5/4
			1.80	CLL	10YR3/1; 2.5Y5/4 mottles
			2.40	CLL	10YR3/1; 7.5Y5/8 mottles

KEY: FSL = fine sandy loam; SC = sandy clay; SCL = sandy clay loam; C = clay; CLL = clay loam; CSL = clay silt loam; SSL = sandy silt loam; SL = silt loam; S = silt; G = gravel; Ca = calcium carbonate concretion; LS = limestone or marl; Fe = ferrous concretion.

provides a typical stratigraphic description for the greater 41HP159 area. The five strata identified in this trench were also identified in the central trackhoe trench excavated at 41HP159 (Figure 6-3), and all are horizontally continuous across the site. These strata are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a yellowish brown (10YR5/6) silty clay loam with a gradual upper boundary at 90 cm (0.9 m) below ground surface. Its maximum excavated depth is 120 cm (1.2 m) below ground surface. Feature 1 at the site, previously identified under Delivery Order Number 6 (Jurney and Bohlin 1993:8-33), is situated within this stratum.

Stratum II is a dark yellowish brown (10YR3/4) silty clay loam with a gradual upper boundary at 41 cm below ground surface. This stratum appears to be a buried B-horizon.

Stratum III is a very dark gray (10YR3/1) silty clay loam with an abrupt upper boundary at

10 cm below ground surface. This is the latest buried A soil horizon (or paleosol) at the site.

Stratum IV is a pale brown (10YR6/3) silt loam. It is a structureless C-horizon that appears to represent a relatively recent flood or sheetwash deposit. This stratum has an abrupt upper boundary at 5 cm below ground surface.

Stratum V extends to the modern ground surface. It is a gray (10YR5/1) silt that contains partially decomposed organic matter.

In general terms, the top >15 cm of the deposits within most sections exposed in this portion of the study area is a structureless, silty loam representing a probable plow zone or other zone of historic disruption of the surface soil (i.e., post-settlement alluvium). Surface and near-surface sediment at this site is the product of overbank deposition associated with episodic flooding of Finley Branch. Generally weak soils have developed on these deposits, and their development appears to have been rapid.

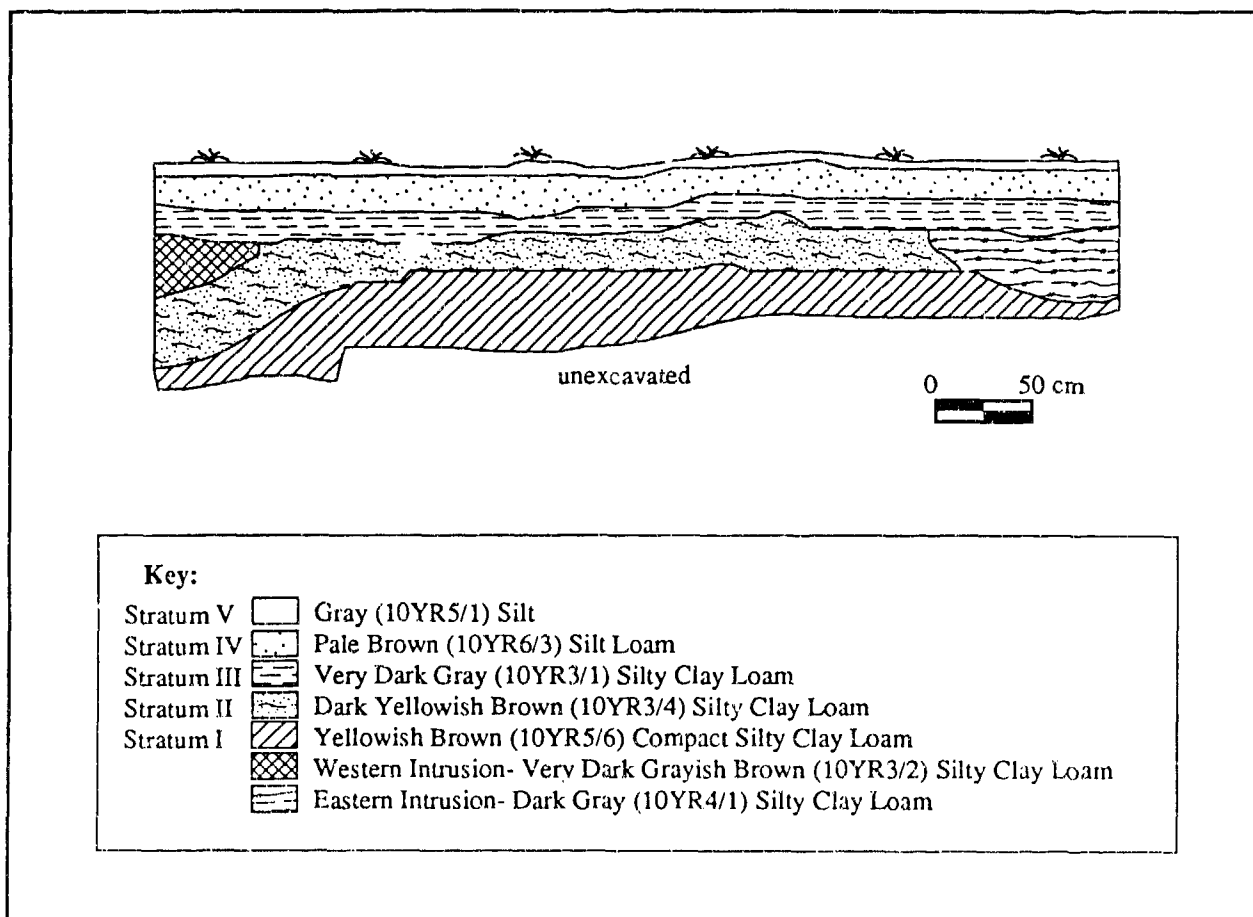


Figure 6-3. West-east profile, north wall of central trackhoe trench (east of Feature 1) at site 41HP159.

Despite the apparent continuity of strata noted between BHT 4 and the central trackhoe trench excavated at 41HP159, lateral continuity of individual strata and their associated soils across the Finley Branch alluvial fan is uncertain, partly because of incomplete exposure, but also as a consequence of apparent facies changes (typical of alluvial fan sedimentary sequences) and differential soil development across the width of the site. It is possible that one or more chute channel(s) (possibly represented by the "intrusions" shown in Figure 6-3) are present in this portion of the study area. If present, the deposits of these ephemeral channels may have replaced part or all of some artifact-bearing strata.

The natural channel of Finley Branch (i.e., prior to channelization ca. 1914-1925) conveyed discharge from a small catchment along the southern margin of the South Sulphur River

Valley. This is one of the smallest catchments within the entire Upper Sulphur River drainage (Mandel 1993). Where comparatively rapid drainage from the valley wall reaches the low-relief valley floor, there is a decrease in gradient and spreading out of the flow direction at which sediment aggrades, forming a small alluvial fan. Strata comprising the lower part of the section exposed in the artificial channel consist of fluvial-channel deposits indicative of fan aggradation.

In subhumid climatic regions, channels on alluvial fans typically are unstable, with frequent lateral shifts or avulsions of channel flow. Lateral movement of the ancestral channel of Finley Branch resulted in gradual isolation of the 41HP159 area from stream channel deposition. Instead, alluvial sediment was conveyed to the site only by flood waters as sheet-wash during

occasional high-discharge events. Flow velocity generally decreases with increasing distance from the channel proper, thereby reducing the competence of flood waters at the perimeter zone of inundation. Sediment composing the upper part of the local section is therefore finer grained than subjacent deposits transported within the ancestral channel, where flow velocities and therefore stream competence were greatest.

Other factors such as climatic variations, which may have changed the discharge and sediment load of the ancestral Finley Branch, were not investigated. Hearths at 41HP159 are buried beneath overbank deposits but lie near the top of that part of the section composed of coarser deposits (not sampled in the profile described). The stratigraphic record at this site may provide information useful in reconstructing mid-Holocene climatic and other environmental conditions.

Merrit Creek

In total, 50 backhoe trenches were excavated within the Merrit Creek drainage basin (Figure 6-4, Table 6-3). These excavation units were distributed along the stream channel ($n=10$), on the floodplain ($n=33$), at the junction of the floodplain and slope ($n=7$).

Merrit Creek: Stream Channel

The 10 backhoe trenches excavated along the Merrit Creek stream channel exposed nine distinct, yet very similar soil profiles (see Table 6-3). The stratigraphic profile obtained from BHT 33, located on the west side of Merrit Creek, best represents the sediments and soils in the Merrit Creek Valley because it is deep and indicates episodal alluviation. The strata identified in this unit (Figure 6-5) are discussed in order from oldest (lowest) to youngest (uppermost). All strata were culturally sterile.

Stratum I extends from 1.3-1.6 m below ground surface, and consists of a mottled clay loam. The matrix color varies from strong brown (7.5YR5/6) to brown (10YR6/3). Mottles range from gray (10YR5/1) to yellowish red (5YR5/8).

Stratum II, which extends from 0.6-1.3 m below ground surface, is a fine sandy loam. Its color is very dark gray (10YR3/1).

Stratum III, ranging from 49-60 cm below ground surface, is a mottled silt loam. Its color varies from top to bottom and both boundaries are diffuse, merging with the overlying and underlying strata. The upper portion is brown (10YR6/3) in color with dark gray (10YR4/1) mottles. Its lower extent is very dark gray (10YR3/1).

Stratum IV, ranging from 30-49 cm below surface, also has diffuse upper and lower boundaries. It is a very dark gray (10YR4/1) silt loam with brown (10YR6/3) mottling.

Stratum V, the surface horizon along the stream channel, extends from the modern ground surface to 30 cm below surface. It is a brown (10YR6/3) silt loam which represents a modern plow zone.

Merrit Creek: Floodplain

Thirty-three (33) backhoe trenches were excavated to test for buried sites and to characterize the geomorphic province. The deposits on the Merrit Creek floodplain consist primarily of clay strata, with isolated lenses of siltier strata. Five backhoe trenches excavated on the floodplain revealed consistent stratigraphy, with shallow plow zones being represented in two trenches. Five strata (all culturally sterile) were identified. These strata are relatively similar to those identified along the Merrit Creek channel, and are assumed to be laterally continuous. The stratigraphy described within BHT 46 (see Figure 6-5) provides a representative profile for the sediments in this portion of the study area, and is described below from oldest (lowest) to youngest (uppermost).

Stratum I is a dark grayish brown (10YR4/2) very compact clay. The upper boundary occurs at 1.44 m below ground surface, and it was excavated to 2.1 m below ground surface.

Stratum II is a slightly darker, black (10YR2/1) soil with diffuse upper and lower boundaries. It ranges in depth from 0.32-1.44 m below surface. Stratum II is densely compacted and has a clayey texture.

Stratum III ranges from 0.25-0.32 m below ground surface. It is a dark gray (10YR4/1) silty clay with a diffuse lower boundary and indistinct upper boundary.

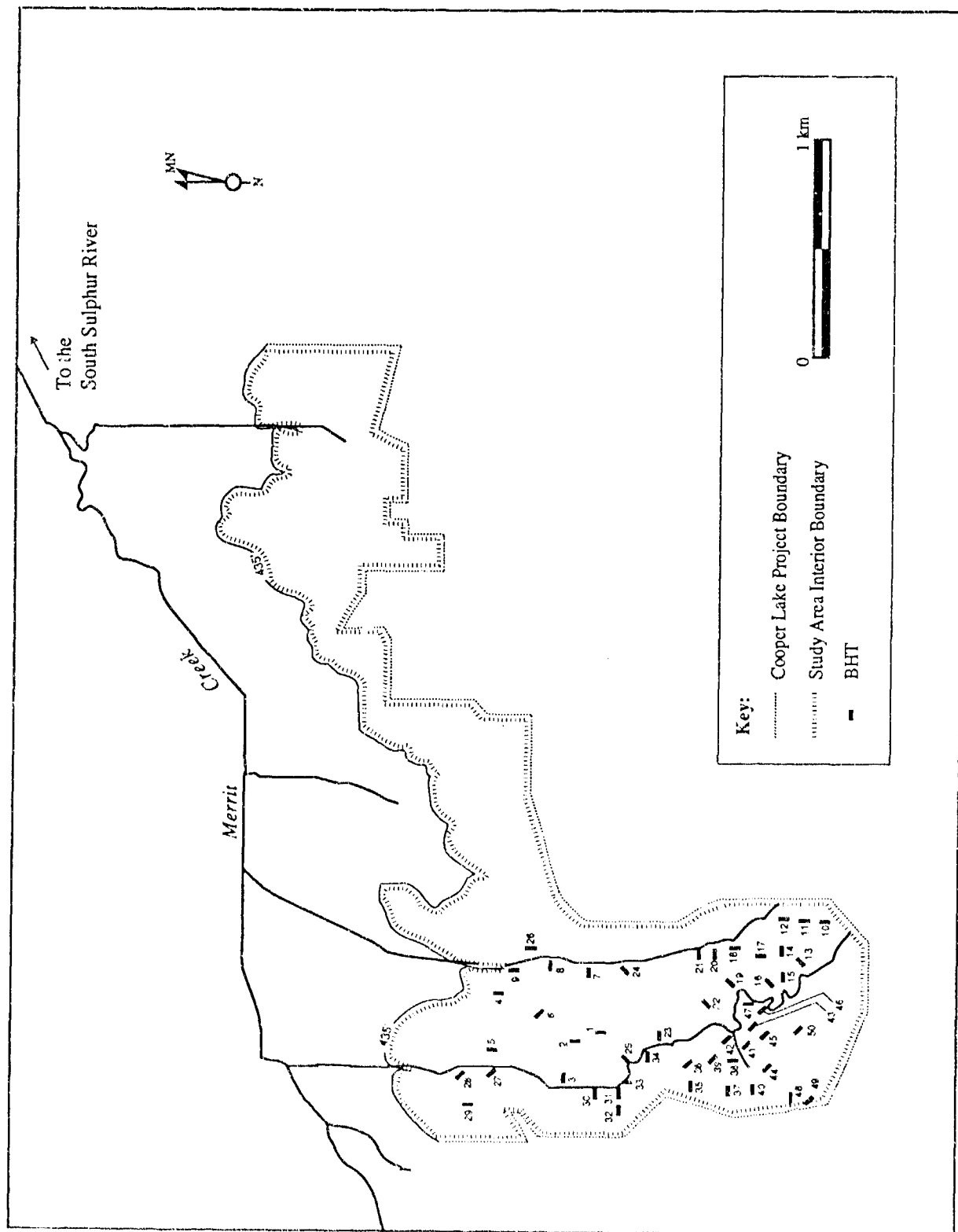


Figure 6-4. Locations of backhoe trenches excavated in the Merritt Creek segment of the Cooper Lake Delivery Order Number 7 study area, Delta County, Texas.

TABLE 6-3

Backhoe Trenches Excavated within the Merrit Creek Drainage

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Channel</i>					
3	5.00	0.70	0.90	SL	10YR7/1; 7.5YR5/8 mottles
			1.57	CLL	2.5Y3/0; 2.5Y5/2 mottles
			2.30	CLL	7.5Y3/0
23	2.30	0.70	0.80	SL	10YR5/3
			2.00	C	10YR3/0
			2.30	CSL	10YR3/1
27	3.60	0.70	0.20	SL	10YR5/3
			0.70	SL	10YR5/3; 10YR7/1 mottles
			2.20	CLL	7.5YR3/0
28	4.00	0.70	0.20	SL	10YR5/3
			0.50	SL	10YR5/3; 10YR7/1 mottles
			2.00	CLL	7.5YR3/0
30	3.60	0.70	1.60	CSL	10YR3/1; 10YR7/1 mottles
			2.50	CSL	7.5YR4/0; 5YR4/6 mottles
33	2.30	0.70	0.30	SL	10YR6/3
			0.49	SL	10YR6/3; 10YR4/1 mottles
			0.60	SL	10YR6/3; 10YR3/1 mottles
			1.30	FSL	10YR3/1
			1.60	CLL	10YR5/1; 5YR5/8 mottles
34	3.20	0.70	0.43	SL	10YR6/3
			1.00	SL	10YR3/1; 10YR6/3 mottles
			1.40	CLL	10YR3/1; 7.5YR5/6 mottles
			1.95	CLL	10YR5/6; 5YR5/8 mottles
35	3.20	0.70	0.40	SL	10YR3/1
			0.91	CLL	10YR4/1; 2.5Y6/4 mottles
			2.00	C	2.5Y6/4; 10YR6/1 mottles
42	3.20	0.70	0.17	CLL	7.5YR3/0; 10YR5/3 mottles
			0.42	SL	10YR4/1; 10YR5/3 mottles
			1.75	CLL	7.5YR2/0
47	3.30	0.70	0.35	C	2.5Y3/0
			0.55	SC	10YR3/4
			1.10	CSL	2.5Y3/0
			1.60	CSL	7.5YR3/2
			1.90	C	7.5YR3/2

TABLE 6-3 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Floodplain</i>					
1	4.50	0.70	0.20	CSL	10YR4/1
			0.50	CLL	2.5Y3/0
			1.10	CLL	10YR3/1; 2.5Y5/4 mottles
			1.50	CLL	2.5Y5/4
2	4.00	0.70	0.14	CLL	2.5Y3/0
			0.28	CLL	2.5Y4/0; 2.5Y5/2 mottles
			0.90	CLL	2.5Y3/0
			1.40	CLL	2.5Y3/0; 2.5Y5/2 mottles
4	3.50	0.70	1.90	CLL	7.5YR3/0; 2.5Y5/4 mottles
5	3.80	0.70	0.25	CLL	10YR4/1; 2.5Y5/2 mottles
			0.70	CLL	2.5Y5/2
			1.70	CLL	7.5YR3/0
6	3.70	0.70	0.20	CLL	2.5Y3/0; 2.5Y5/4 mottles
			0.40	CLL	2.5Y6/2; 10YR4/1 mottles
			1.90	CLL	7.5Y3/0; 2.5Y5/4
7	3.80	0.70	0.20	CLL	7.5YR3/0; 2.5Y4/4 mottles
			2.00	CSL	10YR5/3; 10YR5/1 mottles
8	3.30	0.70	0.20	L	10YR3/1
			0.40	L	7.5Y3/0; 2.5Y5/4 mottles
			0.60	FSL	2.5Y5/2; 7.5YR3/2 mottles
			2.10	CLL	10YR4/1; 10YR5/3 mottles
9	3.20	0.70	0.20	CLL	7.5YR3/0; 2.5Y5/2 mottles
			2.10	CLL	2.5Y5/2; 7.5YR3/0 mottles
10	3.20	0.70	0.30	CLL	2.5Y5/2; 10YR4/1 mottles
			1.30	CLL	7.5Y3/0
			1.50	CLL	7.5Y3/0; 10YR5/1 mottles
11	3.00	0.70	0.20	CSL	10YR5/3; 7.5YR3/0 mottles
			1.50	CLL	7.5YR3/0; 2.5Y5/2 mottles
			1.65	CLL	2.5Y5/4; 2.5Y4/0 mottles
12	3.50	0.70	0.20	CLL	2.5Y5/2; 7.5YR3/0 mottles
			2.20	CLL	7.5YR3/0; 2.5Y5/2 mottles
13	3.00	0.70	1.20	CSL	2.5Y5/4; 7.5YR3/0 mottles
			1.80	CLL	2.5Y3/0

TABLE 5-3 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
14	3.90	0.70	0.40	L	7.5YR3/1
			0.90	L	2.5Y6/4
			1.70	L	7.5YR3/1; 2.5Y6/4 mottles
			1.80	CLL	2.5Y3/1
15	3.60	0.70	0.20	L	10YR4/1
			0.40	CSL	2.5Y5/2; 7.5YR3/0 mottles
			0.70	CLL	7.5YR7/0; 2.5Y5/2 mottles
			1.20	CSL	10YR7/1; 2.5Y5/2 mottles
			1.60	CLL	10YR3/1; 10YR5/2 mottles
			1.75	CLL	2.5Y3/0
16	3.50	0.70	0.20	L	7.5Y3/0
			1.80	CLL	7.5YR3/0; 2.5Y5/2 mottles
			2.00	CLL	2.5Y5/4; 2.5Y5/0 mottles
17	3.60	0.70	0.50	L	10YR3/1; 2.5Y5/4 mottles
			1.20	CLL	7.5Y3/0; 2.5Y5/4 mottles
			1.60	CLL	2.5Y5/4; 2.5Y5/4 mottles
			1.70	CLL	10YR5/1; 2.5Y5/4 mottles
18	3.30	0.70	0.35	L	10YR3/1
			1.45	CLL	7.5YR3/0
			1.60	CLL	10YR6/1; 2.5Y5/4 mottles
19	3.10	0.70	0.40	L	10YR5/3
			2.30	CLL	2.5Y3/0; 2.5Y4/2 mottles
20	3.30	0.70	0.80	CLL	7.5YR3/0
			1.80	CLL	10YR3/1
			2.10	CLL	2.5Y5/4; 10YR5/1 mottles
21	3.10	0.70	0.50	CLL	10YR3/1
			1.50	CLL	10YR3/1; 3.5Y5/4 mottles
			2.10	CLL, Ca	2.5Y5/4; 10YR3/1 mottles
22	3.50	0.70	0.40	CSL	2.5Y5/4; 7.5YR3/0 mottles
			0.70	CLL	7.5YR3/0
			2.10	CSL	7.5YR3/0; 2.5Y4/0 mottles
24	3.70	0.70	1.90	CLL	7.5Y3/0
				FSL	10YR6/3 mottles
25	3.30	0.70	0.55	CSL	10YR6/2
			0.73	CSL	10YR4/1; 10YR5/2 mottles
			0.93	SL	10YR7/2; 10YR4/1 mottles
			1.33	CSL	10YR4/1; 10YR5/4 mottles
			2.20	CLL	7.5YR3/0

TABLE 6-3 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
29	3.60	0.70	0.17	SL	10YR5/3
			0.37	SL	10YR5/3; 10YR7/1 mottles
			1.80	CLL	7.5YR3/0
31	3.20	0.70	0.30	CSL	10YR3/1
			1.00	CSL	10YR3/1; 10YR7/1 mottles
			1.90	CSL	2.5Y5/0; 10YR3/1 mottles
36	3.30	0.70	0.60	SL	10YR3/1
			0.90	CLL	10YR3/1
			1.70	CLL	7.5YR3/0
			2.00	CLL	2.5Y3/0
38	3.50	0.70	0.20	FSL	10YR5/3
			0.36	FSL	10YR3/1; 10YR5/3 mottles
			0.60	FS	10YR6/1; 10YR7/2 mottles
			2.10	CLL	7.5YR2/0
39	3.20	0.70	0.37	SL	10YR4/1; 10YR5/3 mottles
			0.90	FSL	10YR4/1; 10YR7/1 mottles
			2.00	C	7.5YR2/0
41	3.30	0.70	0.45	CLL	2.5Y3/0; 10YR5/3 mottles
			0.80	CLL	7.5YR3/0; 2.5Y5/4 mottles
			1.27	C	2.5Y3/0
			2.00	C	7.5Y3/0
43	3.10	0.70	1.40	CLL	2.5Y3/0
			1.65	C	10YR5/1; 2.5Y5/4 mottles
44	3.30	0.70	0.40	CLL	10YR3/1
			1.20	CLL	7.5YR3/0
			1.70	C	10YR5/1; 7.5YR4/6 mottles
			2.10	C	7.5YR4/0; 10YR5/1 mottles
45	3.20	0.70	0.30	C	10YR3/1
			0.65	CSL	10YR3/2
			1.25	C	7.5YR2/1
			0.25	C	10YR3/1
46	3.30	0.70	0.18	C	10YR3/1
			0.25	C	10YR4/1
			0.32	CSL	10YR4/1
			1.44	C	10YR2/1
			2.10	CSL	10YR4/2

TABLE 6-3 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Floodplain/Slope</i>					
26	3.30	0.70	0.40	SL	10YR4/1
			0.60	CSL	10YR5/3; 10YR3/1
			2.20	CLL, Ca	10YR6/1; 7.5YR5/8 mottles
32	3.60	0.70	1.00	SL	10YR3/1
			2.00	CSL	10YR7/1; 5YR5/8 mottles
37	3.40	0.70	0.30	SCL	5YR3/2
			0.90	C	7.5YR3/2
			1.16	CSL	10YR5/4
			1.90	CSL	10YR5/3
40	3.40	0.70	0.52	CSL	7.5Y3/0; 2.5Y6/4
			0.91	C	7.5Y2/0
			2.00	C	7.5YR3/0
48	3.10	0.70	1.60	CSL	7.5YR3/2
			1.30	CSL	7.5YR7/0
			2.10	C	7.5YR4/2
49	3.10	0.70	0.60	CLL	5YR3/2
			1.20	C	5YR5/1
			2.10	C	5YR5/2
50	2.40	0.70	0.60	L	10YR3/1
			1.00	CLL	10YR3/1; 2.5Y5/2 mottles
			1.90	C	2.5YR3/0
			2.00	C	10YR4/1; 2.5Y5/2 mottles

KEY: FSL = fine sandy loam; SC = sandy clay; SCL = sandy clay loam; C = clay; CLL = clay loam; CSL = clay silt loam; SSL = sandy silt loam; SL = silt loam; S = silt; G = gravel; Ca = calcium carbonate concretion; LS = limestone or marl; Fe = ferrous concretion

Stratum IV is a dark gray (10YR4/1) compact clay which extends from 0.18-0.25 m below ground surface. This is probably a plow pan resulting from intensive cultivation.

Stratum V, the surface stratum, is a hard compacted clay which ranges in depth from 0-0.18 m below ground surface. It appears to be slightly

darker than dark gray (10YR4/1) color noted for Stratum IV.

Although some stratigraphic variation was observed in other portions of this zone, the five strata described above were observed in all test loci. This suggests uniform accretion and soil development occurred in the Merritt floodplain.

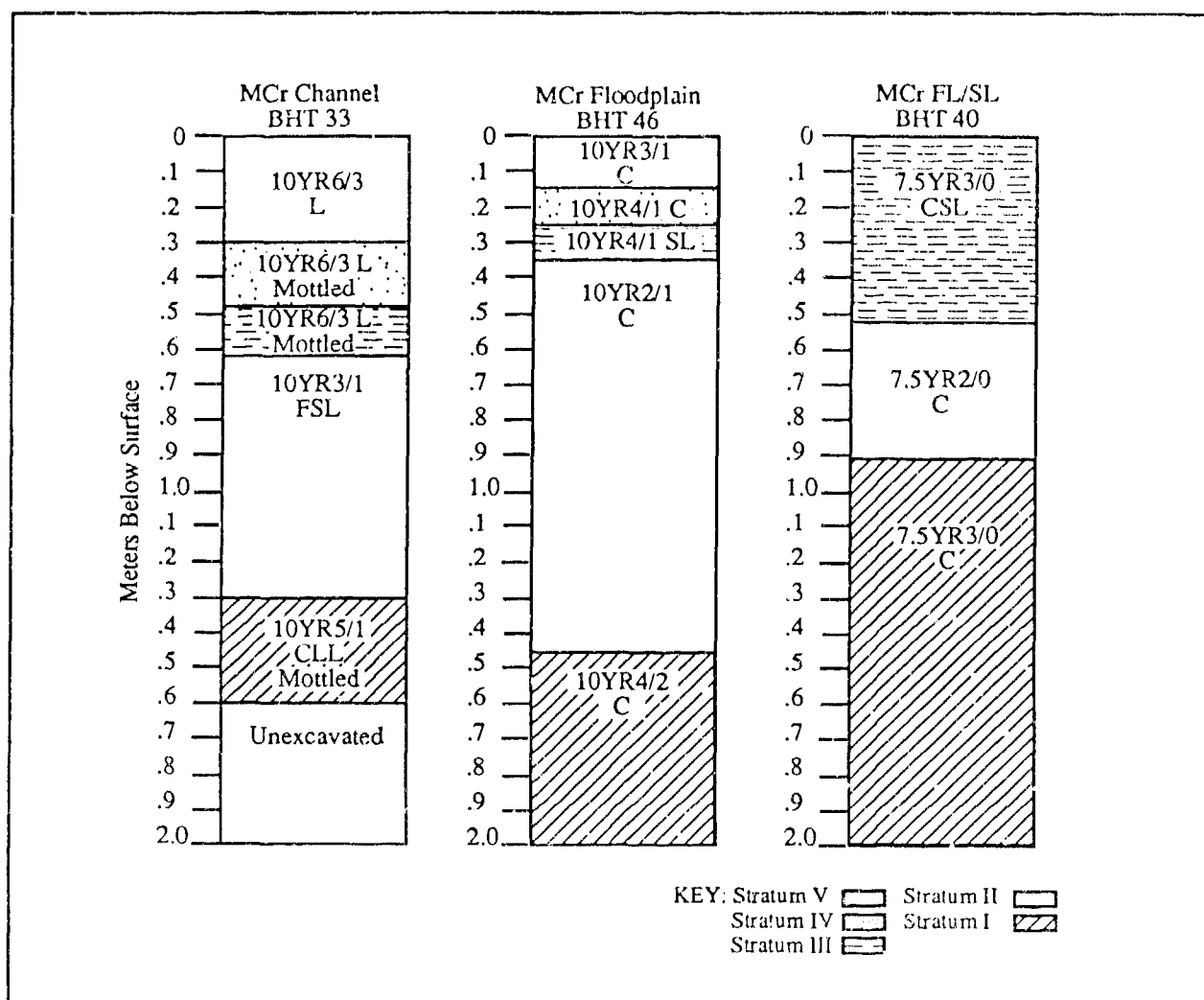


Figure 6-5. Representative stratigraphic profiles from the Merrit Creek (MCr) segment of the Cooper Lake Delivery Order Number 7 study area.

Overview of Deep Testing on the Merrit Creek Floodplain

The excavation of a pipeline trench across the Merrit Creek floodplain in 1986, which was monitored by Prewitt and Associates, Inc. and reported in Fields and Garvey (1986), identified low-density cultural remains ca. 30-73 cm below ground surface in what is now defined as Stratum II. A total of 30 artifacts (none of which were temporally diagnostic) were observed in a 125 m (410 ft) linear stretch of the pipeline (Fields and Garvey 1986:3).

The present investigations indicate that Stratum II is laterally continuous across the Merrit

Creek Valley. Based on the presence of cultural remains within Stratum II in this area, earlier studies identified the top of this unit as a previous occupational surface and the unit, specifically, as a soil horizon which has been buried by subsequent alluvial deposition. However, the prediction of Fields and Garvey (1986:3) that extensive cultural deposits were present across the valley was not confirmed by the present investigations. Site 41HP119 resembles others along the floodplain margin (e.g., sites 41HP159 and 41HP162), where diffuse scatters of fire-cracked rock and lithic debris comprise the dominant site type. The artifact assemblage from site 41HP179, which consists of a single red-

filmed pottery sherd, may represent either a low-density occupation or an artifact which has been transported and redeposited. These sites are not laterally continuous across the floodplain.

Merrit Creek: Floodplain/Slope

A total of seven backhoe trenches were excavated within the floodplain/slope transitional zone in the Merrit Creek Valley (see Figure 6-4, see Table 6-3). The typical soil profile for this portion of the study area, as demonstrated in BHT 40 (see Figure 6-5), consists of three natural soil strata. These are described in order from the oldest (lowest) to youngest (uppermost).

Stratum I is a very dark gray (7.5YR3/0) clay. It has a diffuse upper boundary at 91 cm below surface and was excavated to a maximum depth of 200 cm below ground surface. It is culturally sterile.

Stratum II is a black (7.5YR2/0) clay. It has a gradual upper boundary at 52 cm below surface and is culturally sterile.

Stratum III is the surface soil stratum. It is a very dark gray (7.5YR3/0) silty clay loam with light yellowish brown (2.5Y6/4) mottles. This stratum was culturally sterile in BHT 40 and all other trenches excavated within this zone.

South Sulphur River

A total of 40 backhoe trenches were excavated along the South Sulphur River (Figure 6-6, Table 6-4). The majority of these trenches were located within the South Sulphur River floodplain (n=15) and floodplain/slope (n=21) areas, between the Emblem Creek bottom and Merrit Creek. Four trenches were excavated along the stream channel, outside of the Delivery Order Number 7 study area below the dam in the vicinity of the Big Creek and South Sulphur River confluence, to assess a proposed outfall and rip-rap area.

South Sulphur River: Emblem Bottom Floodplain

This physiographic zone received extensive deep testing via backhoe trenching, as per the specifications of Delivery Order Number 7. The rationale for this emphasis was based on the

perceived high potential for the presence of buried archaeological sites along the floodplain apron or margin. In total, 15 backhoe trenches were excavated in this physiographic zone along the South Sulphur River in the Emblem Bottom (see Figure 6-6, see Table 6-4).

The stratigraphy identified in BHT 77 (Figure 6-7, see Table 6-4) provides the best representation of the natural soil strata in this physiographic setting. The strata are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a mottled very dark gray (10YR3/1) clay loam with dark gray (10YR4/1) and light gray (10YR7/1) mottles. Its diffuse upper boundary occurs at 1.25 m below ground surface and was excavated to 1.8 m below ground surface.

Stratum II is a dark grayish brown (10YR5/2) clay loam. Its diffuse upper boundary occurs at 80 cm below surface.

Stratum III is a very dark gray (10YR3/1) clay loam. It has light gray (10YR7/1) silt films along ped surfaces. Its upper boundary occurs at 50 cm below ground surface. Stratum III forms a very gradual boundary with overlying Stratum IV.

Stratum IV, the surface soil horizon, is a very dark gray (10YR3/1) clay loam. Although there is no distinctive plow zone, this stratum has been cultivated in the past.

South Sulphur River: Floodplain/Slope

Twenty-one backhoe trenches were excavated in the floodplain/slope physiographic zone within the South Sulphur River drainage. The two distinct, characteristic profiles noted in this zone are represented by BHT 51 and BHT 53 (see Figure 6-7, see Table 6-4).

The first of these profiles, a relatively homogeneous clay, was encountered in BHT 51, which was excavated adjacent to site 41HP183. The four natural strata identified in BHT 51 also occurred at site 41HP183. Fire-cracked rock was encountered in Stratum III at 53 cm below ground surface, but all other strata in BHT 51 were culturally sterile. The strata are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a dark gray (2.5Y4/0) clay with olive yellow (2.5Y6/6) mottling. Calcium carbonate concretions are common. Its distinct

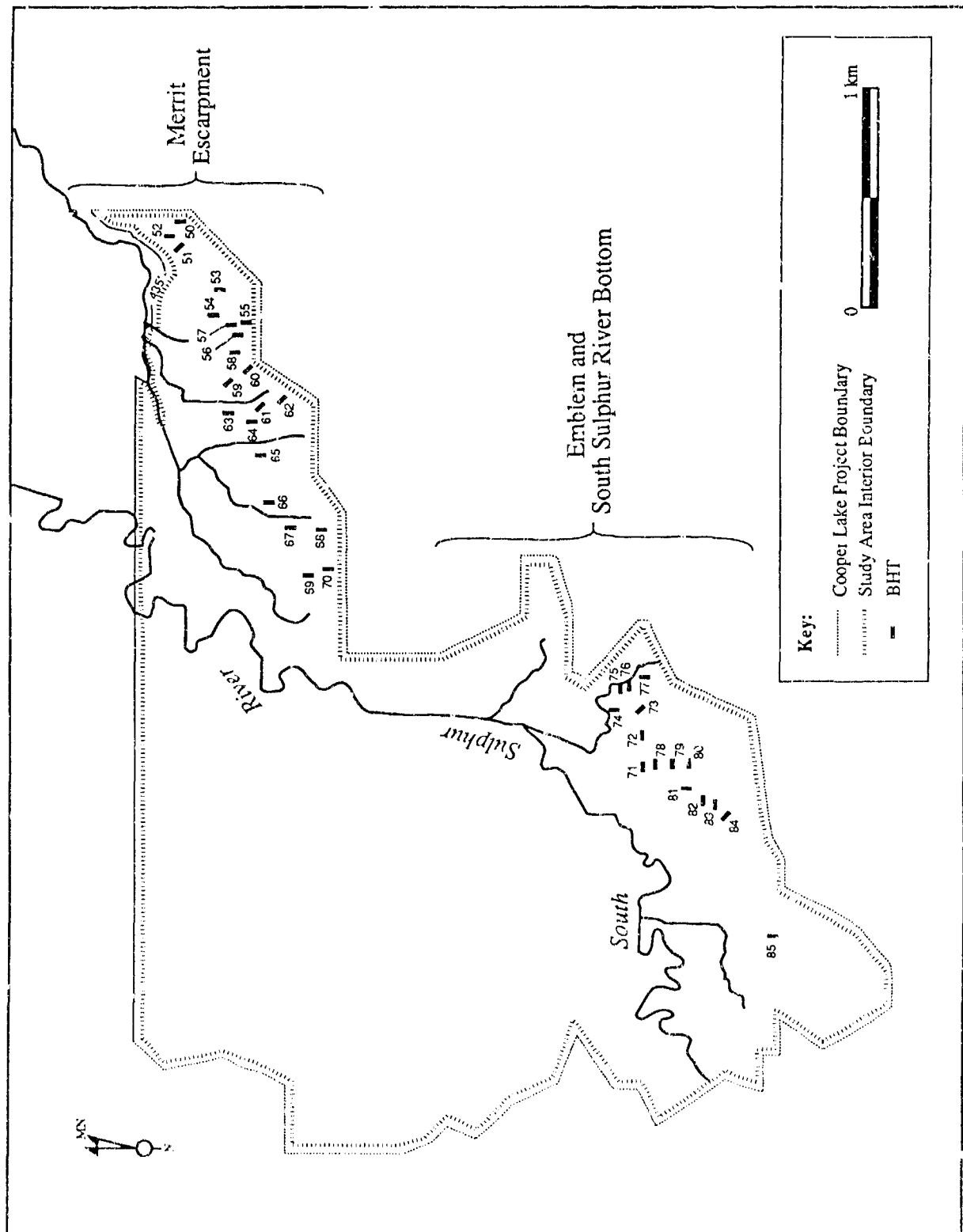


Figure 5-6. Locations of backhoe trenches excavated in the South Sulphur River segment of the Cooper Lake Delivery Order Number 7 study area, Delta County, Texas.

TABLE 6-4

Backhoe Trenches Excavated within the South Sulphur River Drainage,
from Emblem Bottom to Merrit Creek and below Big Creek

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Floodplain (Emblem Bottom)</i>					
71	3.20	0.70	1.20 1.80	SL C	10YR4/1; 10YR7/1 mottles 7.5YR2/0
72	3.00	0.70	0.40 0.50 1.80	CLL C C, Ca	2.5Y3/0 2.5Y3/0; 10YR7/1 mottles 10YR3/1
73	2.60	0.70	0.50 1.45	S C, Ca	10YR4/2 10YR3/1
74	2.50	0.70	0.60 1.50	CLL C	10YR3/1; 10YR7/1 mottles 7.5YR2/0
75	2.50	0.70	0.30 1.10 1.80	CLL CLL C	10YR3/1 10YR3/1; 10YR7/1 mottles 7.5YR2/0
76	3.00	0.70	0.30 1.10 1.85	CLL CLL C	10YR3/1 10YR3/1; 10YR7/1 mottles 7.5YR2/0
77	2.60	0.70	0.50 0.80 1.25 1.80	CLL CLL S CLL	10YR3/1 10YR3/1; 10YR7/1 mottles 10YR5/2 10YR3/1; 10YR7/1, 10YR4/1 mottles
78	3.00	0.70	0.20 1.55	S C	10YR6/2 2.5Y2/0
79	2.60	0.70	0.20 1.55	CSL C	10YR3/1 10YR3/1
80	3.00	0.70	1.65	C	2.5Y3/0
81	3.00	0.70	0.35 1.35	S C	10YR6/2 2.5Y2/0
82	2.30	0.70	0.10 0.30 1.70	C CLL C	10YR3/1; 10YR6/2 mottles 10YR5/2 7.5YR2/0

TABLE 6-4 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
83	2.80	0.70	0.10 0.30 1.70	C CLL C	10YR3/1; 10YR6/2 mottles 10YR5/2 7.5YR2/0
84	3.00	0.70	0.20 0.50 1.35	C S C	10YR3/1; 10YR6/2 mottles 10YR5/2 7.5YR2/0
85	3.20	0.70	0.40 1.85	CLL C	10YR3/1 2.5Y2/0
<i>Floodplain/Slope (Merrit Escarpment)</i>					
50	2.40	0.70	0.60 1.00 1.90 2.00	L L C C, Ca	10YR3/1; 10YR6/2 mottles 10YR3/1; 2.5Y5/2 mottles 2.5Y3/0 10YR4/1; 2.5Y5/2 mottles
51	3.50	0.70	0.40 0.95 1.20 1.80	C C CL, Ca C, Ca	10YR3/1; 10YR5/3 mottles 7.5YR3/0 7.5YR3/0 2.5Y4/0; 2.5Y6/6 mottles
52	2.50	0.70	0.57 1.30 1.80	CLL, G C C, Ca	7.5YR3/0 7.5YR3/0; 2.5Y4/4 mottles 2.5Y6/4
53	3.50	0.70	0.33 0.80 1.60	SS CL C	7.5YR4/4; 10YR7/1 mottles 10YR4/3; 7.5YR5/8 mottles 10YR5/6
54	3.10	0.70	0.30 0.80 1.70	CL CL C, Ca	10YR3/1 10YR3/1; 2.5Y5/6 mottles 2.5Y5/6
55	3.20	0.70	0.40 0.75 1.10 1.80	L CL, Ca S LS	10YR4/1 2.5Y6/4 10YR7/1; 2.5Y6/4 mottles bedrock
56	3.60	0.70	0.60 1.10 1.80	L CLL C	10YR3/1; 10YR5/3 mottles 7.5YR3/0 7.5YR4/0; 2.5Y5/4 mottles

TABLE 6-4 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
57	3.40	0.70	0.25	CSL	2.5Y5/4; 7.5Y4/0 mottles
			0.70	CLL	10YR3/1; 2.5Y5/4 mottles
			1.40	CLL	7.5Y4/0; 2.5Y5/4 mottles
58	3.30	0.70	0.40	L	10YR3/2; charcoal
			0.75	CSL	10YR4/1
			1.20	CSL	10YR3/2; 10YR3/1 mottles
			1.90	C	10YR5/1; 2.5Y5/4 mottles
59	3.20	0.70	0.30	CLL, G	7.5YR3/0; 2.5Y5/4 mottles
			1.00	C, G	10YR3/1; 2.5Y6/4 mottles
			1.60	C, G	2.5Y5/4
60	3.20	0.70	0.50	CLL	10YR5/3
			0.80	CLL, Ca	10YR4/1
			1.10	C	10YR6/1; 7.5YR6/8 mottles
			1.80	C	10YR6/1; 2.5Y5/6 mottles
61	3.10	0.70	0.50	CLL	10YR3/1
			0.80	CLL	10YR3/1; 2.5Y5/4 mottles
			1.60	C	10YR4/1; 2.5Y5/6 mottles
62	2.90	0.70	0.30	CSL	7.5YR2/0; 2.5Y5/4 mottles
			0.70	CL	2.5YR3/0; 2.5Y4/2 mottles
			1.20	C	10YR4/1; 2.5Y4/2 mottles
63	3.20	0.70	0.32	CSL	2.5Y5/4
			0.53	SL	2.5Y5/4; 10YR7/2 mottles
			1.04	CLL	7YR3/0
			1.70	SCL	10YR4/1; 2.5Y5/4 mottles
64	3.40	0.70	0.30	SL	10YR3/1; 10YR6/2 mottles
			1.00	CLL	2.5Y5/4; 10YR3/1 mottles
			1.60	C	2.5Y3/0
65	3.10	0.70	0.30	CSL	2.5Y5/4
			0.60	SL	10YR3/1; 10YR7/1 mottles
			1.00	C	10YR3/1
			1.90	C	10YR4/1; 2.5Y5/4 mottles
66	3.50	0.70	0.50	SL	10YR3/1
			1.10	CSL	10YR4/1; 2.5Y5/4 mottles
			1.80	CSL	10YR5/1; 10YR7/2 mottles

TABLE 6-4 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
67	3.20	0.70	0.20	SL	10YR5/3; 10YR4/1 mottles
			0.40	C	10YR3/1
			0.82	CSL	10YR3/1; 2.5Y5/4 mottles
			1.70	CLL	10YR4/1; 2.5Y6/4 mottles
68	4.00	0.70	0.40	CLL	2.5Y5/4
			1.02	CLL	10YR4/1; 2.5Y5/4 mottles
			1.80	CLL	2.5Y4/0
69	3.00	0.70	0.15	FSL	10YR6/2
			0.50	CLL	10YR3/1
			1.50	C	10YR3/1; 2.5Y5/4 mottles
70	3.40	0.70	0.30	C, Ca	10YR5/1; 2.5Y5/4 mottles
			0.70	C	10YR5/1; 7.5Y5/8 mottles
			1.85	C	10YR4/1; 5YR5/8 mottles
<i>Channel (Below Big Creek)</i>					
202	2.80	0.70	0.80	C	2.5Y3/8
			1.00	C	2.5Y3/0; 10YR4/1 mottles
203	3.40	0.70	0.60	C	2.5Y3/0
			1.10	C	10YR3/1; 10YR4/1 mottles
			1.40	C	10YR4/2; 10YR7/1 mottles
			1.90	C, FeMn	10YR4/2; 10YR7/1 mottles
			2.35	C, FeMn	10YR4/2; 2.5Y7/1, 10YR4/2, 10YR6/2 mottles
204	3.40	0.70	0.30	C	2.5Y3/0
			0.50	C	2.5Y3/0; 10YR4/2 mottles
			0.70	C	2.5Y3/0; 10YR4/2 mottles
			1.30	C, Fe	10YR6/1
			2.00	C	10YR6/1; 10YR4/1 mottles
205	3.00	0.70	0.60	C	2.5Y3/0
			0.90	C	10YR7/1; 10YR5/3 mottles
			1.30	C	10YR7/1
			1.70	C	10YR3/1
			2.03	C	10YR7/1

KEY: FSL = fine sandy loam; SC = sandy clay; SCL = sandy clay loam; C = clay; CLL = clay loam; CSL = clay silt loam; SSL = sandy silt loam; SL = silt loam; S = silt; G = gravel; Ca = calcium carbonate concretion; LS = limestone or marl; Fe = ferrous concretion

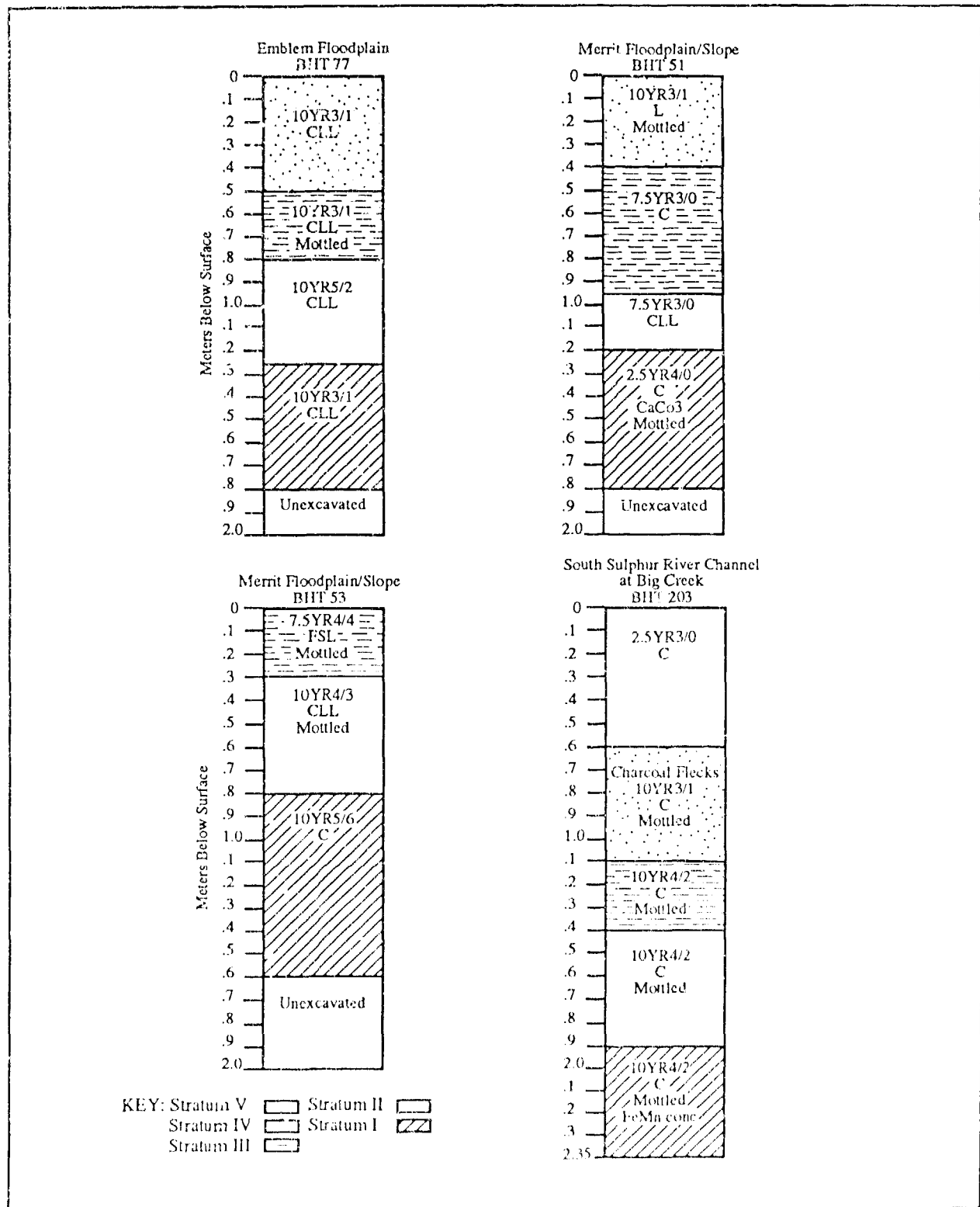


Figure 6-7. Representative stratigraphic profiles from the Emblem Bottom floodplain, the Merrit Creek floodplain/slope, and the Big Creek channel in the South Sulphur River segment of the Delivery Order Number 7 study area.

upper boundary is encountered at 1.2 m below ground surface. It was excavated to 1.8 m below ground surface.

Stratum II is a very dark gray (7.5YR3/0) clay. Calcium carbonate concretions are common. Its diffuse upper boundary occurs at 95 cm below ground surface, and the stratum extends to 1.2 m below ground surface.

Stratum III is a very dark gray (7.5YR3/0) clay, the top of which probably represents the presettlement surface. Its distinct upper boundary occurs 40 cm below ground surface. Its diffuse lower boundary occurs 95 cm below surface. A thin, dispersed lens of fire-cracked rock was encountered 53 cm below ground surface, but no other cultural materials were noted in the profile.

Stratum IV, the surface soil horizon, is a very dark gray (10YR3/1) clay with brown (10YR5/3) mottles. It is culturally sterile and probably formed as a result of alluvial deposition which buried the former occupational surface.

Aerial photographs of the area taken ca. 1950 indicate that extensive, apparently recent flooding had stripped the neighboring, heavily cultivated upland fields and redeposited the sediments in this portion of the South Sulphur River floodplain.

The second variety of soil profile noted within this portion of the study area, which is primarily distinguishable from the uniformly clay-sized soil horizons first by the presence of a sandy surface stratum, is represented in BHT 53 (see Figure 6-7, see Table 6-4). Three soil strata were noted at this location (formerly a cultivated pasture), and all were culturally sterile. These strata are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a yellowish brown (10YR5/6) compact clay. The stratum was excavated to a maximum depth of 1.6 m below surface. Its diffuse upper boundary occurs at 80 cm below ground surface.

Stratum II is a dark brown (10YR4/3) clay loam with strong brown (7.5YR5/8) mottles. Its abrupt upper boundary occurs at 33 cm below surface.

Stratum III is the 33 cm thick surface stratum. At this locus most of the stratum corresponds to the modern plow zone. It is a brown (7.5YR4/4) silty sand with light gray (10YR7/1) mottles. Because its consistency is

suitable for use in tar-based roadways, this sandy epipedon has been mined by the road departments of Hopkins and Delta counties.

South Sulphur River: Stream Channel Below Big Creek

This area is below the dam and thus outside of the boundaries of Cooper Lake (see Figure 6-1). All of the other drainages investigated as part of Delivery Order Number 7 and previous Cooper Lake project studies (Perttula 1988; Ferring 1993; Gadus et al. 1991) lie upstream of this area, and their erosional and depositional processes have had an influence on the geomorphic development of these lower reaches of the South Sulphur River. The study area has also been strongly influenced by the processes of Big Creek, a higher order drainage course which lies outside of both the present study area and that of any previous geomorphic investigations conducted for the Cooper Lake project.

A total of four backhoe trenches were excavated in this area (Figure 6-8, see Table 6-4). Dense floodplain forest, man-made levees, and the remoteness of the area combined to limit the scope of work that could be carried out here. Backhoe Trench 203, located directly in the rip-rap installation area, provides the most representative soil profile. Five natural soil strata, all culturally sterile, were identified in BHT 203 (see Figure 6-7). These strata are described from oldest (lowest) to youngest (uppermost).

Stratum I is a black (10YR4/2) clay with mottling that increases toward its lower extent and ranges in color from light gray (10YR7/1), to dark grayish brown (10YR4/2), to light brownish gray (10YR6/2) in color. Iron oxide concretions are more common than in Stratum II. The upper boundary of Stratum I is diffuse and occurs at 1.9 m below ground surface. It was excavated to a maximum depth of 2.35 m below surface.

Stratum II is also a mottled clay. The matrix is black (10YR4/2) and the mottles are light gray (10YR7/1). The upper boundary is diffuse and occurs at 1.4 m below surface. Iron oxide concretions increase in frequency within this stratum.

Stratum III is a mottled clay. The matrix is dark gray (10YR4/2) and the mottles are light gray

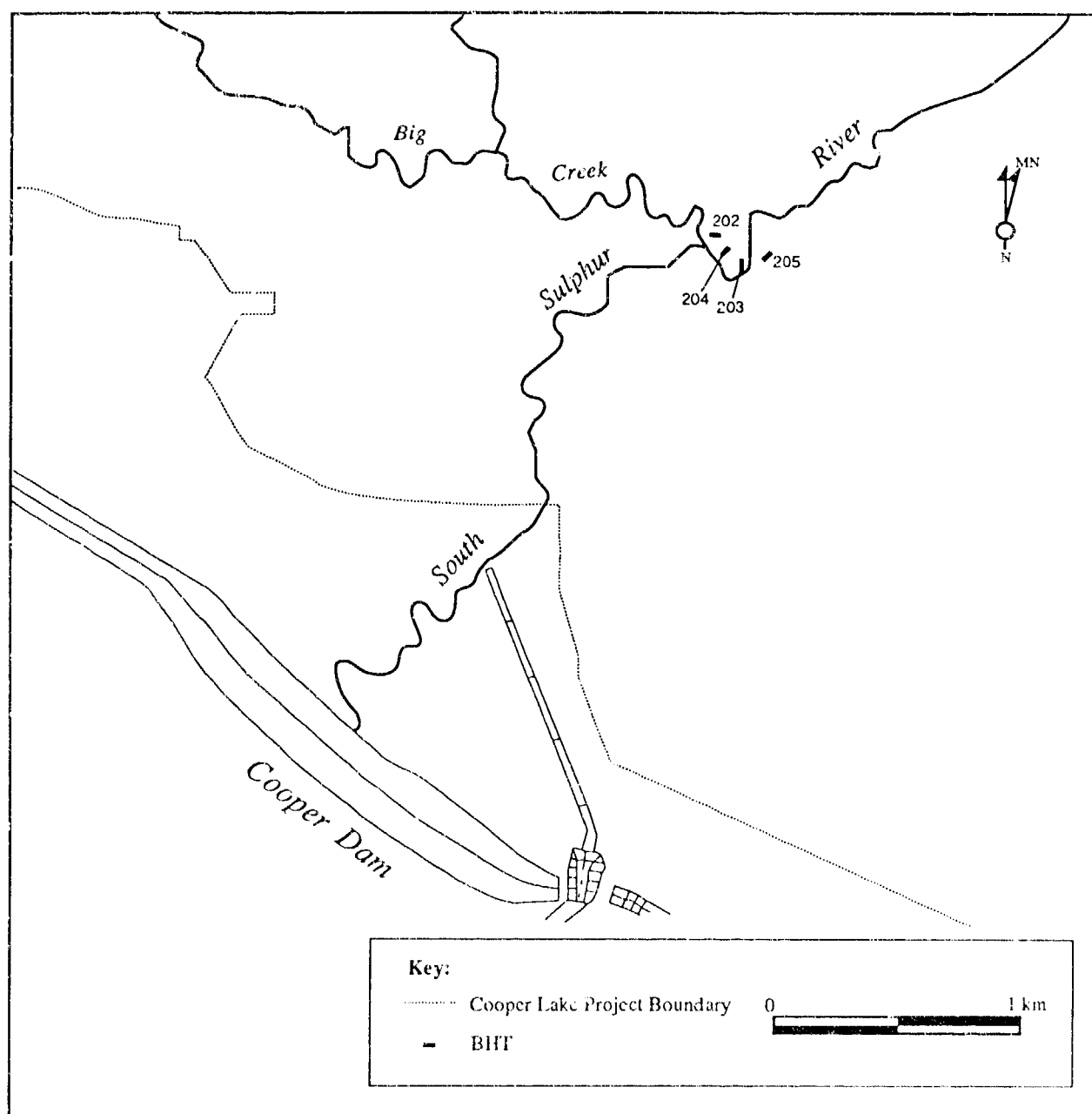


Figure 6-8. Locations of backhoe trenches excavated in the South Sulphur River stream channel at Big Creek near the dam axis, South Sulphur River segment of the Cooper Lake Delivery Order Number 7 study area, Delta County, Texas.

(10YR7/1). Iron oxide concretions are absent. The upper boundary is diffuse, and occurs at 1.1 m below ground surface.

Stratum IV is a very dark gray (10YR3/1) clay with dark gray (10YR4/1) mottles. It has an abrupt upper boundary at 0.6 m below ground surface.

Stratum V, the surface horizon, is a very

dark gray (2.5Y3/0) clay. It extends to 0.6 m below ground surface.

Middle Sulphur River

In total, 39 backhoe trenches were excavated along the Middle Sulphur River drainage and in the vicinity of Lost Ridge (Figure 6-9, Table 6-5).

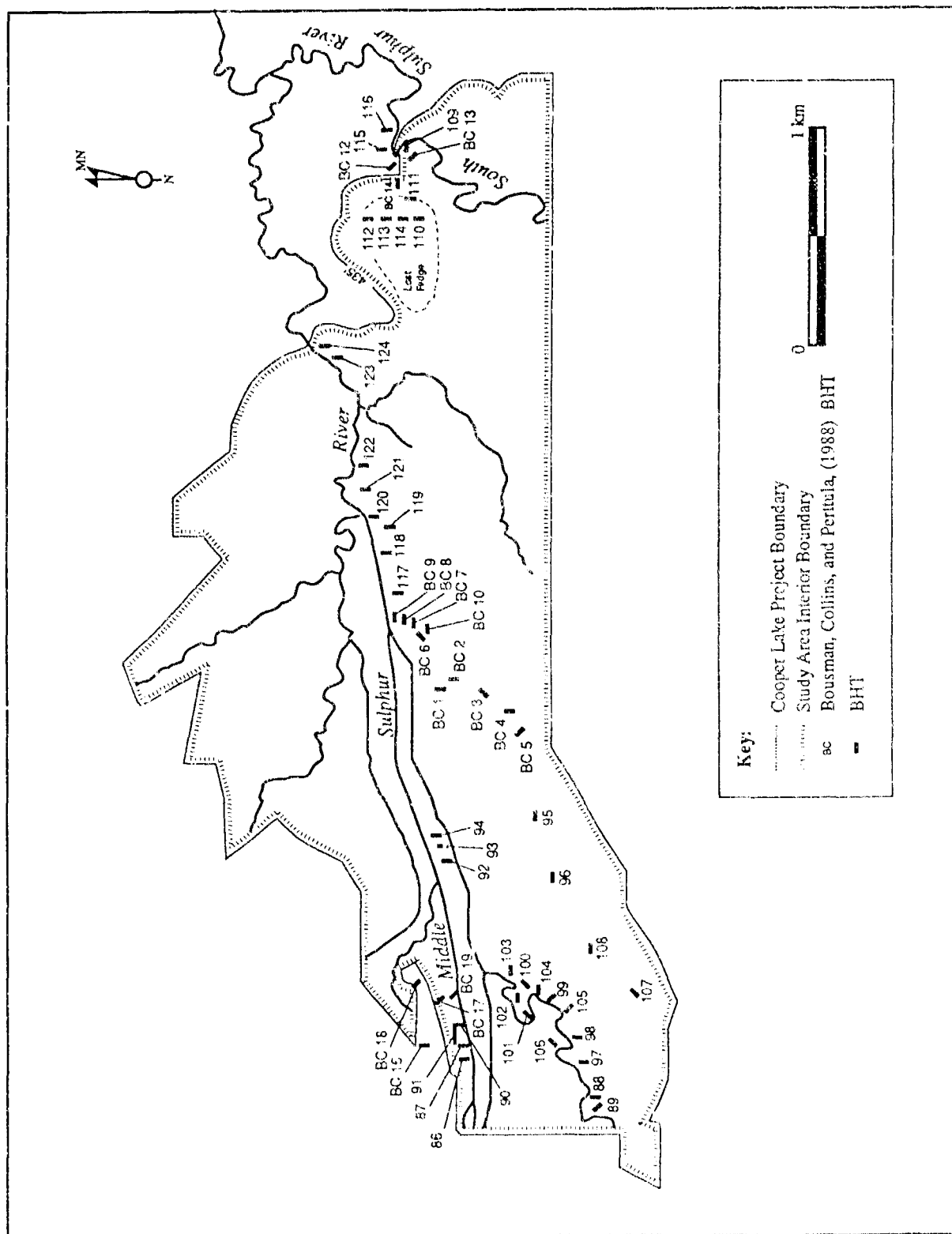


Figure 6-9. Locations of backhoe trenches excavated in the Middle Sulphur River segment of the Cooper Lake Delivery Order Number 7 study area, Delta County, Texas.

TABLE 6-5

Backhoe Trenches Excavated along the Middle Sulphur River and on Lost Ridge

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Channel</i>					
86	6.50	0.70	0.50	CSL	2.5Y6/2; 10YR3/1 mottles
			1.60	CL	10YR3/1
			2.85	C	10YR3/1
87	10.00	0.70	0.30	C	7.5YR3/0
			0.70	CSL	10YR4/1
			0.92	CSL	10YR4/2
			1.57	C	10YR6/2
			3.00	CSL	10YR4/1
88	12.70	0.70	0.26	CSL	10YR4/1; 10YR7/1 mottles
			1.40	SCL	10YR4/1; 7.5YR3/0 mottles
			2.00	C	7.5Y3/0
89	19.00	0.70	0.29	C	7.5YR3/0
			1.25	CLL	10YR4/1
			2.10	CLL	10YR4/1; 10YR7/1 mottles
90	12.00	0.70	0.50	CSL	2.5Y6/2; 10YR3/1 mottles
			0.95	CL	10YR3/1
			1.20	CL	10YR5/1; 7.5YR3/0 mottles
			1.90	CSL	10YR6/1; 10YR3/1 mottles
			2.84	C	10YR3/1; 10YR7/1 mottles
91	24.00	0.70	0.32	C	7.5YR3/0
			0.57	CSL	10YR4/1
			0.77	CSL	10YR4/2
			1.30	SCL	10YR6/2
			2.05	CSL	10YR4/1
92	3.50	0.70	0.22	CLL	10YR4/1; 10YR7/1 mottles
			0.60	CSL	10YR4/1; 10YR7/1 mottles
			1.30	CL	10YR4/1
			2.00	C	7.5YR2/0
93	3.40	0.70	0.18	CLL	10YR4/1
			0.98	C	10YR3/1; 10YR7/1 mottles
			1.20	C	2.5Y3/0
			1.70	CLL	10YR3/1; 10YR7/1 mottles
94	3.00	0.70	0.33	C	10YR3/1
			0.57	C	10YR3/1; 10YR7/1 mottles
			1.90	C	10YR3/1

TABLE 6-5 (cont.)

<i>Zone BHT</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Texture</i>	<i>Munsell Color</i>
97	3.40	0.70	0.50 2.00	C SSL	10YR3/1 10YR4/2; 10YR5/2 mottles
98	3.00	0.70	0.85	CLL	10YR3/1
120	3.20	0.70	0.72 0.93 1.35	SSL C C	7.5YR6/2 7.5YR4/2 7.5YR2/0
121	3.00	0.70	0.60 1.00 1.65	SSL C C	10YR7/2 10YR3/1 10YR5/2
122	3.60	0.70	0.25 0.67 1.03 1.58	SSL C C SSL	10YR6/1 10YR5/2 10YR2/1 10YR6/2
123	3.10	0.70	0.55 1.10 1.75	SSL C SSL	10YR7/2 10YR3/1 10YR3/1
124	3.10	0.70	0.55 1.10 1.75	SSL C SSL	10YR7/2 10YR3/1 10YR3/1
<i>Floodplain</i>					
95	3.00	0.70	1.90	C	7.5Y2/0
96	3.00	0.70	1.50	C	7.5Y2/0
99	3.20	0.70	0.25 1.15 1.85	C CSL C	10YR3/1 10YR3/2 10YR4/2
100	2.70	0.70	0.50 1.30 1.80	CSL SSL SSL	10YR2/1 10YR4/1 10YR5/1
102	3.30	0.70	0.30 1.15 1.60	C CSL SSL	10YR2/1 10YR3/3 10YR5/2
103	3.00	0.70	0.30 1.80	C SSL	7.5YR2/0 10YR4/3

TABLE 6-5 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
104	3.20	0.70	0.35 1.60	C SSL	7.5YR2/0 10YR4/3
105	3.20	0.70	0.55 1.20	C SSL	7.5YR2/0 10YR4/2
106	3.75	0.70	0.20 2.00	C CSL	10YR3/2 10YR5/1
108	3.40	0.70	1.10	C	10YR2/1
117	3.20	0.70	0.20 0.65 1.65	CSL CSL C	10YR5/2 2.5Y6/0 10YR7/1
118	3.20	0.70	0.40 1.85	C C	10YR6/2 10YR6/1
119	3.10	0.70	0.40 0.55 1.80	C C C	10YR7/2 10YR5/1 10YR6/2
<i>Low Floodplain Rises</i>					
101	3.35	0.70	0.50 1.25 1.65	C CSL SSL	10YR2/1 10YR3/3 10YR5/2
107	2.10	0.70	0.20 1.45	SSL SSL, Ca	2.5YR5/4 2.5YR7/4
<i>Lost Ridge Floodplain</i>					
109	3.50	0.70	1.80	no profile	—
115	3.50	0.70	0.70 0.92 1.60	SSL C SSL	10YR5/3 10YR3/1 10YR5/4
116	3.20	0.70	0.40 0.70 1.60	SSL C C	10YR5/3 10YR4/1 10YR4/2

TABLE 6-5 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Lost Ridge Floodplain/Slope</i>					
110	3.50	0.70	0.43	C	10YR4/1
			0.76	C	10YR3/1
			1.30	C	10YR3/2
			1.85	SCL	10YR5/2
111	3.30	0.70	0.20	FSL	10YR5/2
			0.38	C	10YR4/2
			0.45	FSL	10YR5/3
			0.80	C	10YR3/1
			1.30	C	10YR2/1
			1.88	SCL	10YR4/2; 10YR7/3 mottles
112	3.40	0.70	0.38	FSL	10YR7/3
			0.92	L	10YR8/2
			1.10	C	10YR4/3
			1.45	C	10YR3/1
			2.07	SCL	10YR6/2
113	3.50	0.70	0.80	SSL	2.5Y7/2
			0.95	L	10YR6/2
			1.40	CSL	10YR4/1
			1.75	C	10YR5/2
114	3.50	0.70	0.80	SSL	10YR5/2
			1.10	C	10YR4/2
			1.45	CSL	10YR5/3
			1.65	C	10YR4/3

Key: FSL = fine sandy loam; SC = sandy clay; SCL = sandy clay loam; C = clay; CLL = clay loam; CSL = clayey silt loam; SSL = sandy silt loam; SL = silt loam; S = silt; G = gravel; Ca = calcium carbonate concretion; LS = limestone or marl; Fe = ferrous concretion.

The majority of the trenches (n=31) excavated along the Middle Sulphur River were relatively evenly distributed among the stream channel (n=16) and floodplain (n=13) physiographic zones, and two were excavated on low floodplain rises (or, perhaps more appropriately, low hills). The eight trenches excavated on Lost Ridge were distributed in floodplain (n=3) and floodplain/slope (n=5) settings.

The investigations in this portion of the study area included a re-examination of site 41DT141.

The sediments at this location appear to be predominantly of recent age, as suggested by the relatively homogenous profiles and subtle textural differences. The area's lower strata (see below) are relatively structureless loamy sediments with variable amounts of sand. Subsequent investigations by Gadus et al. (1991:21-30) indicate that most cultural materials in this portion of the study area are located 1.2-1.5 m below ground surface, and all overlying sediments are culturally sterile. Three fire-cracked rocks

recovered by Gadus et al. (1991:21-30) from 2.3-2.6 m below ground surface suggest additional, deeper cultural deposits.

Typical soil profiles for the tested areas within the Middle Sulphur River drainage are described below by physiographic zone.

Middle Sulphur River: Stream Channel

Three to five natural strata were identified in the backhoe trenches excavated along the Middle Sulphur channel. Minor differences in the thickness of the surface horizons were the only variations noted in all 16 backhoe trenches, except for the anthropogenically influenced profiles at sites 41DT141 and 41DT161. The representative soil profile described for this zone was obtained from BHT 91 (Figure 6-10), an east-west trending trench connecting BHTs 87 and 90 within the mapped limits of site 41DT141 (see Figure 6-9; see Chapter 8, this volume). The five strata identified in this trench are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a dark gray (10YR4/1) silty clay loam. It has a diffuse upper boundary at 1.3 m below ground surface and was excavated to a maximum depth of 2.05 m below ground surface. It is culturally sterile.

Stratum II is a light brownish gray (10YR6/2) sandy clay loam. It has a diffuse upper boundary at 0.77 m below ground surface. It is culturally sterile.

Stratum III is a dark grayish brown (10YR4/2) silty clay loam. The abrupt upper boundary at 56 cm below ground surface is assumed to be the presettlement landscape. It is culturally sterile.

Stratum IV is a dark gray (10YR4/1) silty clay loam. It has an abrupt upper boundary at 32 cm below ground surface. It is culturally sterile.

Stratum V, the surface horizon, is a very dark gray (7.5YR3/0) clay. It may be derived from alluvial overbank sediment deposited sometime after the 1850s or, more likely, from 1914-1924 Levee District improvements.

Middle Sulphur River: Floodplain

Three natural strata were identified in five of the 13 backhoe trenches excavated within this

physiographic zone (see Figure 6-9, see Table 6-5). The representative soil profile from BHT 119 (see Figure 6-10) is described below from oldest (lowest) to youngest (uppermost). All three strata are culturally sterile.

Stratum I is a light brownish gray (10YR6/2) clay. Its diffuse upper boundary occurs at 0.55 m below ground surface, and it was excavated to a maximum depth of 1.8 m below ground surface.

Stratum II is a gray (10YR5/1) compacted clay. Its diffuse upper boundary occurs at 0.4 m below ground surface. This stratum may represent the prehistoric land surface.

Stratum III is a light gray (10YR7/2) clay. Stratum III most likely represents overbank deposition.

Middle Sulphur River: Floodplain Rises

Two backhoe trenches were excavated within low rises (or hills) in the Middle Sulphur River floodplain and slightly different profiles were noted in each (see Table 6-5). The two strata identified in BHT 107 (see Figure 6-10) are described below from oldest (lowest) to youngest (uppermost). Both strata are culturally sterile.

Stratum I is a pale yellow (2.5YR7/4), loosely consolidated loam with noticeable amounts of sand. Calcium carbonate concretions are present. Its diffuse upper boundary occurs at 20 cm below ground surface, and it was excavated to 1.45 m below surface. Stratum I is culturally sterile in BHT 107.

Stratum II is a 20-cm thick, light olive brown (2.5YR5/4) loam with noticeable amounts of sand. This surface stratum has been cultivated in the past.

Middle Sulphur River: Lost Ridge Floodplain and Floodplain Slope

Lost Ridge is an elongate area of slightly elevated ground in the midst of the floodplain at the junction of the South Sulphur and Middle Sulphur rivers. It may be an erosional remnant of an ancient cutoff. Lateral migration of the river, extensive channelization, and levee construction in combination with agricultural activities in this area have produced highly variable sedimentary profiles. A total of eight backhoe trenches were

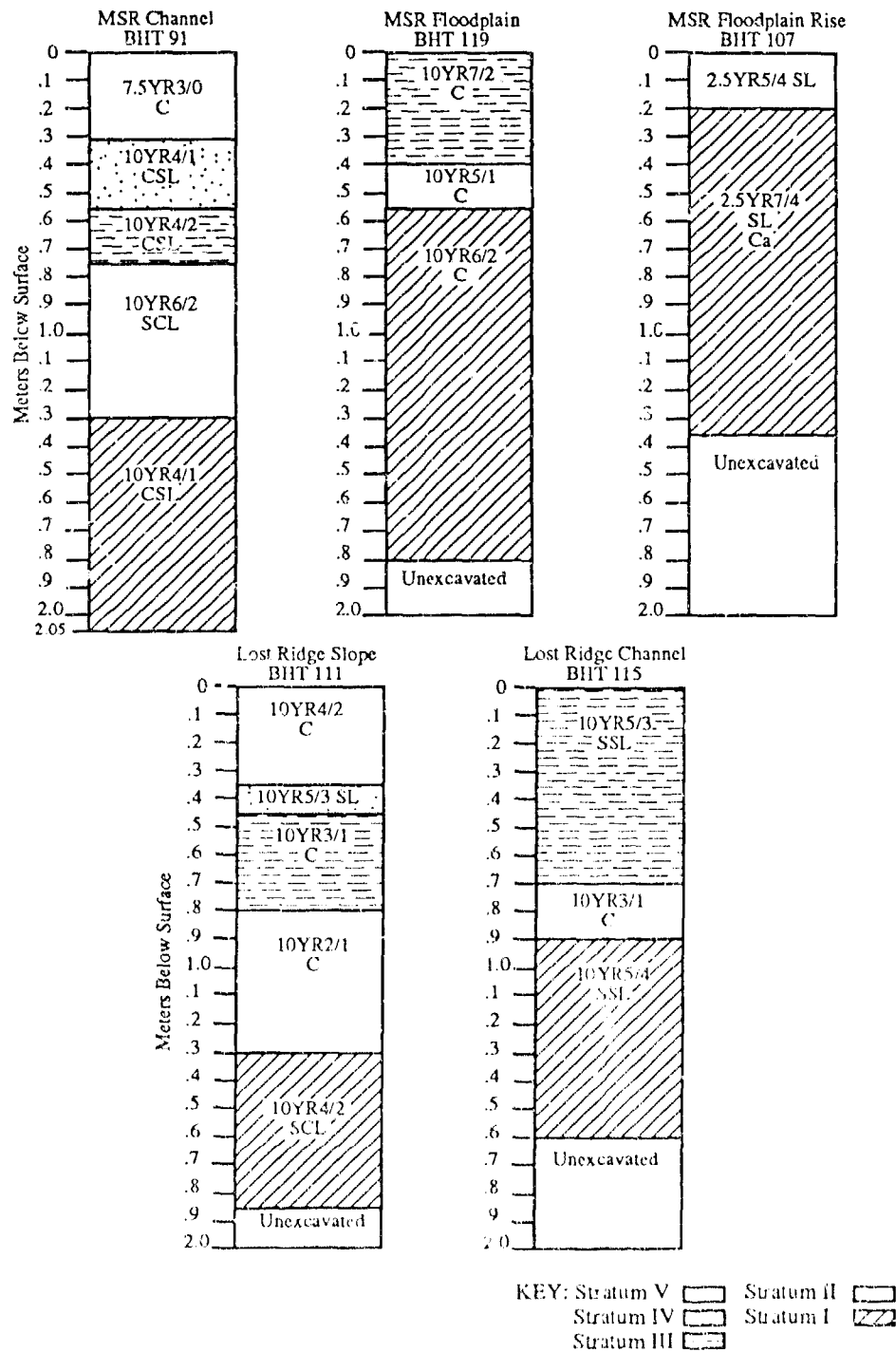


Figure 6-10. Representative stratigraphic profiles from the Middle Sulphur River (MSR) segment of the Cooper Lake Delivery Order Number 7 study area.

excavated in this area, three on the floodplain proper and five on the floodplain/slope (see Figure 6-9).

Two of the backhoe trenches (i.e., BHTs 115 and 116) excavated on the Lost Ridge floodplain were culturally sterile. The third (i.e., BHT 109), excavated within the boundaries of site 41DT6, yielded cultural materials (see Chapter 8). Backhoe Trench 115 (see Figure 6-10, see Table 6-5), situated 20 m from the channel proper, was excavated in what appears to be a relatively undisturbed area. The three natural soil strata identified in this trench are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a yellowish brown (10YR5/4) silt loam with some sand present. Its upper boundary is abrupt, and occurs at 0.92 m below ground surface. It was excavated to 1.6 m below ground surface.

Stratum II is a very dark gray (10YR3/3) compacted clay. Its distinct upper and lower boundaries occur at 0.7 m and 0.92 m below ground surface, respectively.

Stratum III, the surface horizon, represents recent overbank deposition. It is a brown (10YR5/3) silty loam containing pockets of sand. It was excavated to a maximum thickness of 0.7 m.

The five backhoe trenches excavated on the Lost Ridge floodplain/slope (BHTs 110, 111, 112, 113, and 114) were culturally sterile. The stratigraphy identified in BHT 111 (see Figure 6-10, see Table 6-5), which provides the best representation of the area's natural soil strata, is described below in order from oldest (lowest) to youngest (uppermost).

Stratum I is a dark grayish brown (10YR4/2) sandy clay loam with very pale brown (10YR7/3) mottles. Its diffuse upper boundary occurs at 1.3 m below ground surface. Stratum I was excavated to 1.88 m below ground surface.

Stratum II is a black (10YR2/1) compacted clay. Its diffuse upper and lower boundaries occur at 0.8 m and 1.3 m below ground surface, respectively.

Stratum III is a very dark gray (10YR3/1) clay. It has a distinct upper boundary at 0.45 m below ground surface.

Stratum IV is a brown (10YR5/3) sandy loam. Its diffuse upper boundary occurs at 38 cm

below ground surface. The top of this stratum may be a relict prehistoric land surface that has been buried by the alluvium of Stratum V.

Stratum V, extending from 38 cm below ground surface to the modern surface, is a dark grayish brown (10YR4/2) clay. Its upper 20 cm consists of a recent, fine sandy loam plow zone that is organically enriched, grayish brown (10YR5/2) in color, and slightly less compacted than the stratum's lower portion.

Jernigan Creek

The dense riparian vegetation in the Jernigan Creek Valley inhibited extensive deep testing via backhoe trenching, especially in the channel area. Only very limited portions of this study area segment have been cultivated sometime in the past. The 1950 aerial photograph of this area indicates severe flooding and reworking of surface sediments along the north side of the stream. Eight backhoe trenches were excavated in this portion of the study area (Figure 6-11, Table 6-6), including one in an upland setting, two along the stream channel, and five in the floodplain.

Jernigan Creek: Channel

Backhoe trenches 131 and 132 were excavated within 30 m of the Jernigan Creek channel (see Figure 6-11). The burial of an immature cow (*Bos taurus*), bone fragments of which were recovered 50-65 cm below ground surface in BHT 131, appears to have disturbed the sediments in this trench. The representative profile is therefore described for BHT 132 (Figure 6-12, see Table 6-6).

Stratum I is a black (10YR2/1) clay. It has a gradual upper boundary at 50 cm below ground surface and extends to a maximum excavated depth of 2.0 m. It is culturally sterile.

Stratum II is a light brownish gray (10YR6/2) clay with small inclusions of silt. It has a distinct upper boundary at 38 cm below ground surface. It is culturally sterile. The obviously intrusive, fragmentary skeletal *Bos* remains were removed from this stratum in BHT 131.

Stratum III is a very dark gray (10YR3/1) loose, structureless clay. As no artifacts were recovered, it is assumed to be culturally sterile.

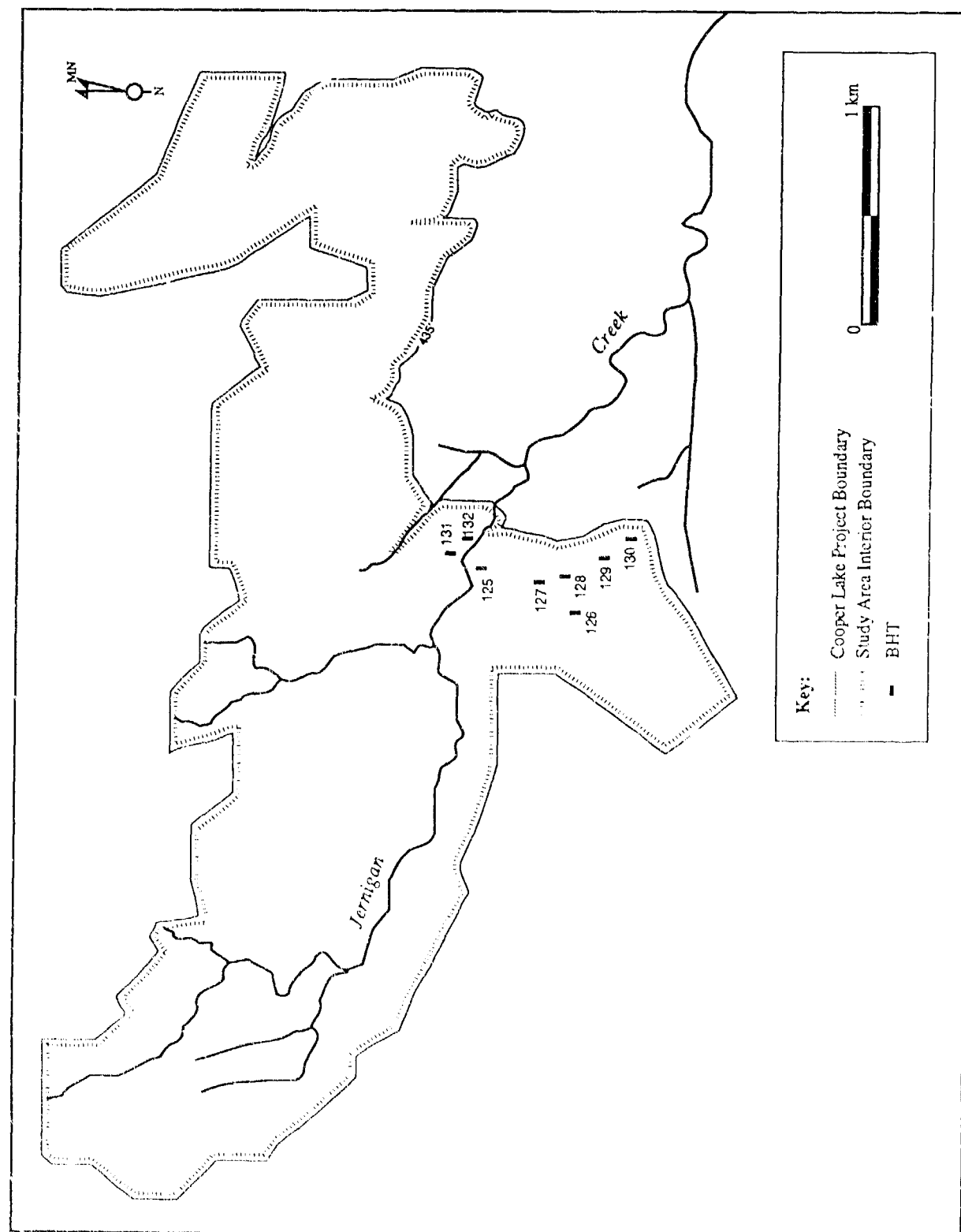


Figure 6-11. Locations of backhoe trenches excavated in the Jernigan Creek segment of the Cooper Lake Delivery Order Number 7 study area, Delta County, Texas.

TABLE 6-6

Backhoe Trenches Excavated within the Jernigan Creek Drainage

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Upland</i>					
126	3.20	0.70	0.40	FSL	7.5YR5/6
			0.55	C	7.5YR6/2
			1.50	C	7.5YR5/0
<i>Channel</i>					
131	3.40	0.70	0.60	C	10YR3/1
			1.30	C	10YR4/2
			1.90	CSL	10YR6/3; 10YR8/1 mottles
132	3.40	0.70	0.38	C	10YR3/4
			0.50	C	10YR6/2
			2.00	C	10YR2/1
<i>Floodplain</i>					
125	3.10	0.70	0.55	CSL	10YR6/2
			1.45	C	10YR3/1
127	3.20	0.70	0.60	C	7.5YR4/0
			1.50	C	10YR3/1
128	2.80	0.70	0.45	C	7.5YR4/0
			1.45	C	10YR3/1
129	3.00	0.70	1.40	SSL	10YR5/1
			1.65	C	10YR2/1
130	3.20	0.70	0.35	C	10YR5/2
			1.08	C	10YR5/1
			1.45	C	10YR2/1

KEY: FSL = fine sandy loam; SC = sandy clay; SCL = sandy clay loam; C = clay; CL = clay loam; CSL = clay silt loam; SSL = sandy silt loam; SL = silt loam; S = silt; G = gravel; Ca = calcium carbonate concretion; LS = limestone or marl; Fe = ferrous concretion.

Jernigan Creek: Floodplain

Backhoe Trench 130 provided the most representative profile for the Jernigan Creek floodplain (see Figure 6-12). As is demonstrated by Table 6-6, this profile is also quite similar to those identified in backhoe trenches excavated in the Jernigan Creek channel physiographic zone.

The three natural strata represented in BHT 130 are described below from oldest (lowest) to youngest (uppermost). All are culturally sterile.

Stratum I is a black (10YR2/1) clay. Its gradual upper boundary occurs at 1.08 m below ground surface, and the stratum was excavated to a maximum depth of 1.45 m below ground surface.

Stratum II is a gray (10YR5/1) clay. Its gradual upper boundary occurs at 35 cm below ground surface.

Stratum III, the surface horizon, is a 35-cm thick grayish brown (10YR5/2) clay. It is a modern plow zone.

Jernigan Creek: Upland

The single backhoe trench excavated in this portion of the study area, BHT 126, contained three natural soil strata (see Figure 6-12, see Table 6-6). These strata are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a gray (7.5YR5/0) clay that is extremely hard and compact. Its distinct upper

boundary occurs at 55 cm below ground surface, and it was excavated to 1.5 m below ground surface. Stratum I is culturally sterile.

Stratum II is a pinkish gray (7.5YR6/2) clay that is dry and compact. Its diffuse upper boundary occurs at 40 cm below ground surface. Stratum II is culturally sterile.

Stratum III, the surface stratum, is 40 cm of brown (7.5YR5/6) sand. It is very compact. Stratum III may represent alluvium which buried Stratum II. Although BHT 126 was culturally sterile, additional hand excavations conducted in March 1991 (see Chapter 8, site 41DT177) indicated that prehistoric and historic cultural materials were present within stratum III in areas adjacent to that trench.

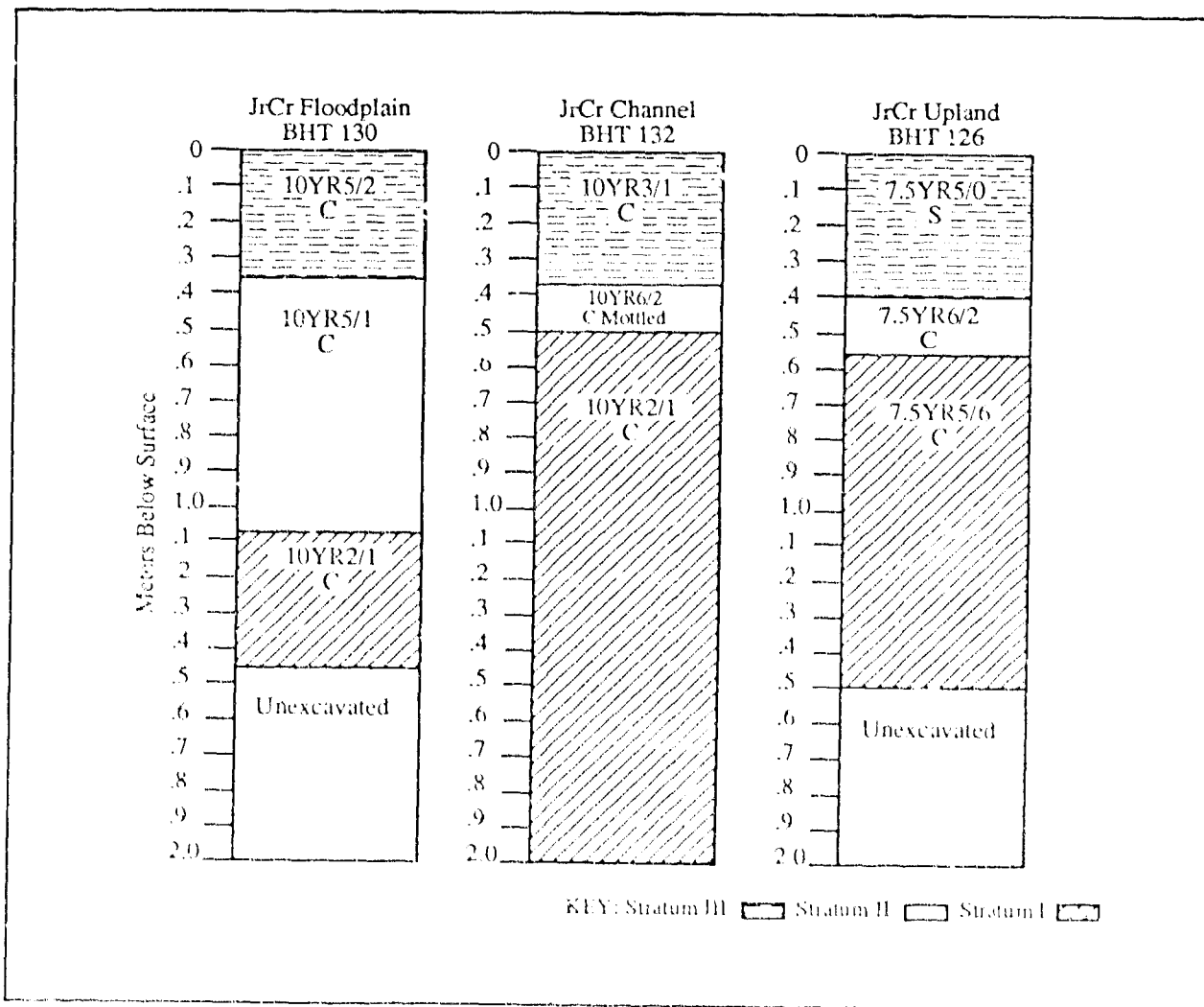


Figure 6-12. Representative stratigraphic profiles from the Jernigan Creek (JrCr) segment of the Cooper Lake Delivery Order Number 7 study area.

Johns Creek

Cultivated fields and pastures were more frequent in the Johns Creek Valley than in any other portion of the Delivery Order Number 7 study area, making it easier to test via backhoe trenching. In total, 38 backhoe trenches were

excavated within four physiographic zones in the Johns Creek drainage (Figure 6-13, Table 6-7), including: the floodplain ($n=20$), floodplain rises ($n=2$), the floodplain/slope interface ($n=3$), and the slope/upland interface ($n=13$). Representative soil profiles from the trenches excavated in all of these zones are described below.

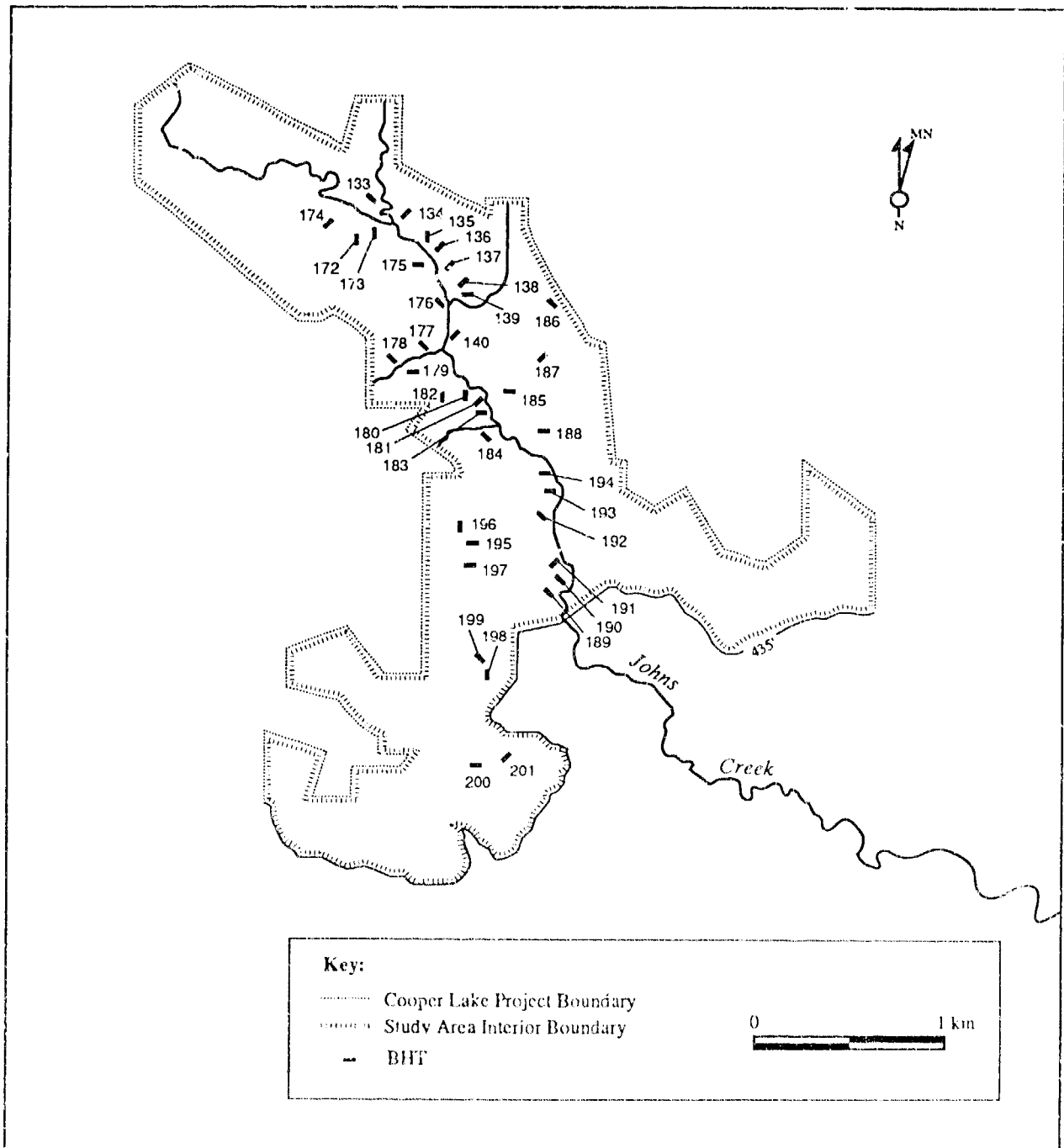


Figure 6-13. Locations of backhoe trenches excavated in the Johns Creek segment of the Cooper Lake Delivery Order Number 7 study area, Delta County, Texas.

TABLE 6-7

Backhoe Trenches Excavated within the Joins Creek Drainage

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Floodplain</i>					
133	3.00	0.70	0.50	CSL	10YR4/2
			1.20	C	10YR2/1
			1.70	C	10YR5/2
134	3.50	0.70	0.45	SSL	10YR6/2
			1.10	C	10YR4/3
			1.50	C	10YR5/3
135	3.40	0.70	0.70	SSL	10YR6/2
			1.30	CSL	10YR3/2
			1.65	CSL	10YR4/2
136	3.00	0.70	0.60	C	7.5YR6/2
			1.35	C	10YR6/3
			1.55	CSL	10YR6/2
137	2.60	0.70	0.55	C	10YR5/2
			0.80	C	10YR3/2
			1.25	C	10YR3/3
139	3.20	0.70	0.45	CSL	10YR4/2
			0.75	C	10YR3/2
			1.60	C	10YR2/2
140	3.00	0.70	0.20	CSL	10YR5/3
			0.80	C	10YR6/3
			1.60	C	10YR6/4
172	3.00	0.70	1.30	L	7.5YR2/0
173	3.00	0.70	0.50	C	7.5YR3/0
			1.20	C	10YR3/1
			1.40	C	10YR4/1
174	3.00	0.70	0.50	C	7.5YR3/0
			1.20	C	10YR3/1
			1.40	C	10YR4/1
175	3.00	0.70	0.50	C	7.5YR3/0
			1.20	C	10YR3/1
			1.40	C	10YR4/1
177	3.00	0.70	1.30	C	7.5YR3/0

TABLE 6-7 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
184	3.10	0.70	0.40 0.85 1.55	CLL C CLL	10YR3/1; 10YR3/2 mottles 7.5YR2/0 10YR3/1; 7.5YR5/8 mottles
187	2.90	0.70	0.65 1.65	C C	2.5Y5/4; 7.5Y4/0 mottles 10YR3/1
189	2.90	0.70	0.30 0.50 0.90 1.50	C CLL C C	10YR2/1 10YR3/1 10YR3/1; 10YR5/3 mottles 10YR3/1
190	2.90	0.70	0.30 0.50 0.90 1.50	C CLL C C	10YR2/1 10YR3/1 10YR3/1; 10YR5/3 mottles 10YR3/1
191	2.80	0.70	0.50 0.80 1.40	CLL CLL C	10YR3/1 10YR3/1; 10YR8/1 mottles 10YR3/1; 10YR6/1 mottles
192	2.80	0.70	0.50 0.80 1.40	CLL CLL C	10YR3/1 10YR3/1; 10YR8/1 mottles 10YR3/1; 10YR6/1 mottles
193	2.80	0.70	0.50 0.80 1.40	CLL CLL C	10YR3/1 10YR3/1; 10YR8/1 mottles 10YR3/1; 10YR6/1 mottles
194	3.10	0.70	0.70	C	10YR2/1
<i>Floodplain Rises</i>					
185	2.80	0.70	1.60	C	7.5YR3/0
196	3.50	0.70	0.17 0.75	S S	10YR3/1; 10YR6/3 mottles 5YR5/8
<i>Floodplain/Slope</i>					
178	3.00	0.70	0.30 0.85 1.40	CLL C, Ca C, Ca	10YR3/2 10YR3/1 10YR7/1; 7.5YR6/8 mottles
179	2.90	0.70	0.40 1.40	CSL CLL	10YR4/2 10YR5/1; 10YR7/1 mottles
188	2.80	0.70	1.40	C	10YR2/1

TABLE 6-7 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Slope/Upland</i>					
138	3.20	0.70	0.15	CSL	10YR3/2
			0.65	C	10YR5/4
			1.70	C	10YR5/1
176	3.10	0.70	0.30	CLL	10YR3/1
			0.65	CLL	10YR3/1; 10YR7/1 mottles
			1.20	CSL	10YR7/1
			1.65	C	10YR4/1
180	3.20	0.70	0.50	CLL	10YR3/1
			1.00	C	10YR3/1; 10YR7/1 mottles
			1.25	C	10YR3/1; 10YR5/2 mottles
181	3.20	0.70	0.30	CLL	10YR3/1
			0.80	CLL	10YR3/2
			1.65	CSL	10YR7/1; 2.5Y6/4 mottles
182	3.40	0.70	0.50	CLL	10YR3/2
			1.15	CSL	10YR7/1; 2.5Y6/4 mottles
183	3.10	0.70	0.15	FSL	10YR5/2
			0.55	FSL	10YR6/2; 10YR7/1 mottles
			1.55	CLL	10YR3/2
186	3.20	0.70	0.25	CSL	10YR6/1; 10YR3/2 mottles
			0.40	FSL	10YR6/1
			1.10	C	10YR3/2; 2.5YR4/8 mottles
			1.55	C	10YR4/1
195	3.30	0.70	0.10	S	10YR4/1
			0.40	S	10YR7/4
			0.52	CSL	7.5YR5/6
			1.00	C	10YR7/1; 5YR5/8 mottles
			1.65	C	10YR7/1; 2.5YR4/8 mottles
197	3.00	0.70	0.14	FSL	10YR3/2; 10YR6/3 mottles
			0.56	C	10YR7/1; 5YR5/8 mottles
			1.50	C	10YR6/2; 2.5YR4/8 mottles
198	3.10	0.70	0.32	FSL	10YR6/4
			0.40	CSL	10YR7/3
			0.90	C	10YR4/2; 2.5YR4/8 mottles
199	3.20	0.70	0.20	FSL	10YR4/2
			0.63	FSL	10YR6/3
			0.90	C	10YR4/1; 2.5YR6/4 mottles

TABLE 6-7 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
200	3.00	0.70	0.40	CLL	10YR3/1; 10YR6/1 mottles
			1.15	C	10YR3/1; 10YR3/2 mottles
201	3.30	0.70	0.20	CSL	10YR3/1; 10YR7/1 mottles
			0.35	C	10YR3/1; 10YR7/1 mottles
			0.90	C	10YR6/1; 2.5YR4/8 mottles
			1.45	C	10YR4/1; 5YR5/8 mottles

KEY: FSL = fine sandy loam; SC = sandy clay; SCL = sandy clay loam; C = clay; CLL = clay loam; CSL = clay silt loam; SSL = sandy silt loam; SL = silt loam; S = silt; G = gravel; Ca = calcium carbonate concretion; LS = limestone or marl; Fe = ferrous concretion.

Johns Creek Floodplain

In total, 20 backhoe trenches were excavated in this physiographic zone (see Figure 6-13, see Table 6-7). Three natural strata were identified in the vast majority of these backhoe trenches, with only minor differences observed in strata thickness and the presence or absence of a plow zone. The strata identified in BHT 136 (Figure 6-14), which displays a typical profile for this zone, are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a light brownish gray (10YR6/2) silty clay loam. Its indistinct upper boundary occurs at 1.35 m below ground surface, and it was excavated to a maximum depth of 1.55 m below ground surface. Stratum I is culturally sterile.

Stratum II is a pale brown (10YR6/3) mottled clay. Its abrupt upper boundary occurs at 60 cm below ground surface. Stratum II is culturally sterile.

Stratum III, the surface stratum, is a pinkish gray (7.5YR6/2) mottled clay that extends 0-60 cm below ground surface. This stratum may be derived from historic alluvial sedimentation. It is culturally sterile.

Johns Creek: Floodplain Rises

Two backhoe trenches (BHTs 185 and 196) were excavated on low rises or hills in the Johns Creek floodplain (see Figure 6-13, see Table 6-7).

A single very dark gray (7.5YR3/0) clay stratum was identified in BHT 185. This stratum was excavated to a maximum depth of 1.6 m below ground surface and was culturally sterile.

Two natural strata were identified in BHT 196 (see Figure 6-14). These strata are described below from older (lower) to younger (uppermost). Both strata were culturally sterile.

Stratum I is a yellowish red (5YR5/8) silt. It has a distinct upper boundary at 17 cm below ground surface and was excavated to a maximum depth of 75 cm below ground surface. Stratum I contained prehistoric cultural materials, primarily lithic debitage flakes, at a shovel-tested locality immediately south of BHT 196 (see Chapter 8, site 41DT163).

Stratum II, the surface horizon, is a very dark gray (10YR3/1) silt with pale brown (10YR6/3) mottles.

Johns Creek: Floodplain/Slope

Compared to the rest of the Delivery Order Number 7 study area the transition from floodplain to upland is the most gradual and extensive in area extending from Doctors Creek to Klondike, referred to here as the floodplain/slope physiographic zone. As a result, differentiation between the floodplain/slope, slope, and slope/upland physiographic zones was very difficult. Distinguishing between physiographic boundaries was hampered further by the

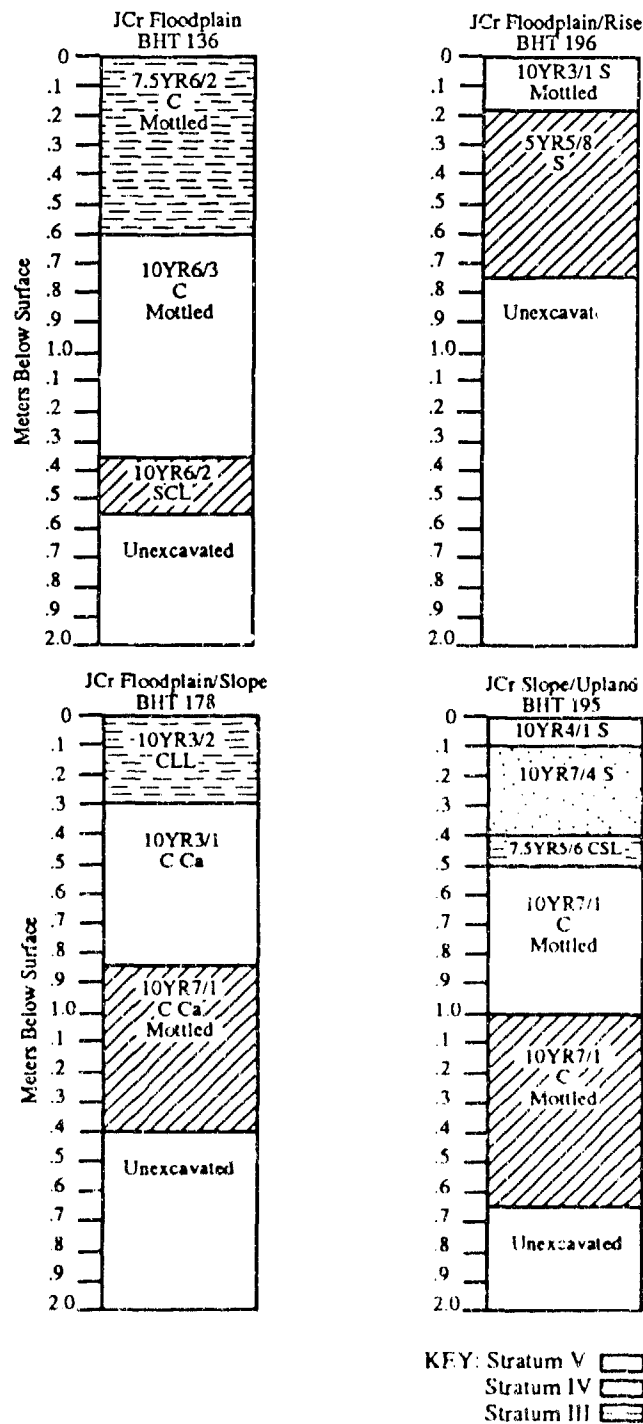


Figure 6-14. Representative stratigraphic profiles from the Johns Creek (JCr) segment of the Cooper Lake Delivery Order Number 7 study area.

presence of perched water tables during wet months. This zone contains phenomena such as localized, enclosed depressions; cracks; and pimple mound fields.

Three backhoe trenches (BHTs 178, 179, and 188) were excavated within this physiographic zone (see Figure 6-13, see Table 6-7). The three strata identified in BHT 178 (see Figure 6-14) are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a light gray (10YR7/1) clay with yellowish red (7.5YR6/8) mottles. Calcium carbonate concretions are present. This stratum's diffuse upper boundary occurs at 85 cm below ground surface, and it was excavated to a maximum depth of 1.4 m below ground surface. Stratum I is culturally sterile.

Stratum II is a very dark gray (10YR3/1) clay. Calcium carbonate concretions are present. It has a diffuse upper boundary at 30 cm below ground surface. Stratum II is culturally sterile.

Stratum III, the surface epipedon, is a very dark grayish brown (10YR3/2) clay loam. Stratum III, the modern plow zone, is culturally sterile.

Johns Creek: Slope/Upland

A thin veneer of Uvalde gravel is present on the east-facing side slopes of the Johns Creek Valley. Uvalde gravels were widely deposited but only sporadically preserved as a surface veneer throughout East Texas. As their deposition is thought to date from the Pliocene, they are only observed at the surface on upland terrains where they have escaped both subsequent burial or erosion. The gravels include materials useful for tool production, and sites are known to be associated with denser gravel fields upstream and outside of the Cooper Lake area (Daniel McGregor, personal communication 1991). The gravels here, however, do not compare in density and extent. The study area within the Johns Creek slope is one of several areas along the Johns Creek and Jernigan Creek upland slopes north of the South Sulphur River where such gravels are known to occur in proximity to Cooper Lake.

In total, 13 backhoe trenches were excavated in this physiographic zone (see Figure 6-13, see Table 6-7). The stratigraphy of BHT 195, situated in a relatively undisturbed setting within what is

presently a stand of post oak trees and which was post oak savannah in prehistoric times, provides a typical soil profile for the zone (see Figure 6-14). The five natural strata identified in this trench are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a light gray (10YR7/1) clay with gray (10YR6/1) to red (2.5YR4/8) mottles. Its indistinct upper boundary occurs at 1 m below ground surface, and it was excavated to a maximum depth of 1.65 m below ground surface. Stratum I is culturally sterile.

Stratum II is a light gray (10YR7/1) clay with yellowish red (5YR5/8) mottles. Its abrupt upper boundary occurs at 52 cm below ground surface. Stratum II is culturally sterile.

Stratum III is a strong brown (7.5YR5/6) clay silt loam. Its distinct upper boundary occurs at 40 cm below ground surface. Stratum III is culturally sterile.

Stratum IV is a very pale brown (10YR7/4) silt, and may represent part of the original surface epipedon. Its upper boundary occurs at 10 cm below ground surface. Stratum IV is culturally sterile.

Stratum V, the surface stratum, is a dark gray (10YR4/1) silt. It is culturally sterile.

Doctors Creek

In total, 31 backhoe trenches were excavated along Doctors Creek in the Delivery Order Number 7 study area (Figure 6-15, Table 6-8). Additional backhoe trenches were excavated along Doctors Creek in the Delivery Order Number 4 (Ferring 1993) and Delivery Order Number 6 (Jurney, Buyce, and Mandel 1993) survey areas. The portion of the Doctors Creek drainage within the present study area consists of a gradually sloping transition from floodplain to upland, and contains a number of pimple mound fields. The majority of backhoe trenches excavated along Doctors Creek were emplaced on the floodplain ($n=12$) and floodplain rises ($n=16$) physiographic zones. The remaining three trenches were excavated near the Doctors Creek channel ($n=2$) and the slope/upland ($n=1$) zones.

Pimple mounds, also known as prairie mounds, sandmounds, and prairie blisters, are a ubiquitous geomorphic feature in portions of six

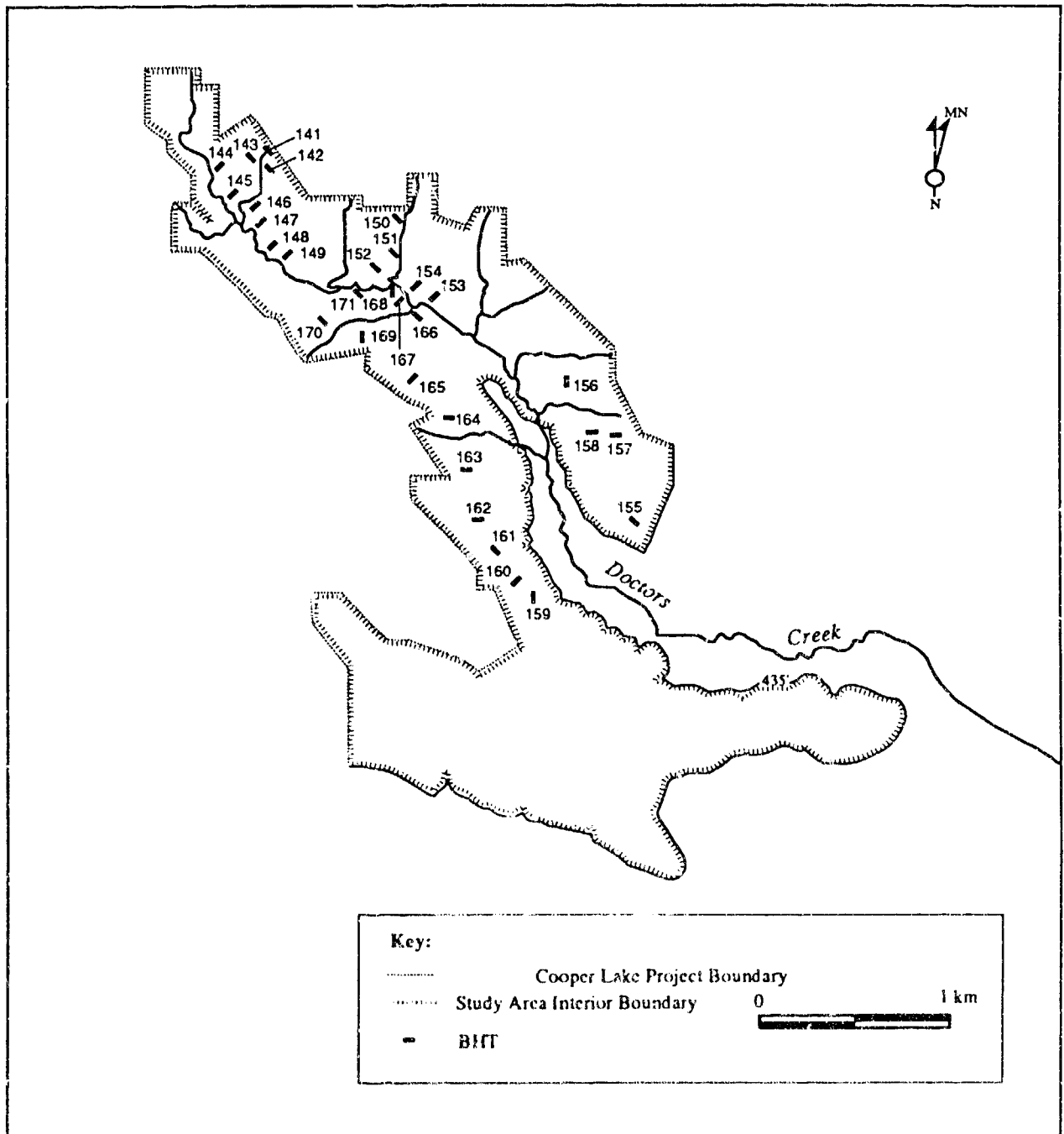


Figure 6-15. Locations of backhoe trenches excavated in the Doctors Creek segment of the Cooper Lake Delivery Order Number 7 study area, Delta County, Texas.

states west of the Mississippi River. They range from 20-150 cm in diameter and 3-20 cm in height and typically form in clusters of 10-200 which spread over 1-10 ha ([2.5-24.7 acres] Saucier 1978; Aten and Bollich 1981; O'Brien, Lyman, and Holland 1989:83).

The precise age and processes for the development of these features have been the subject of extensive debate. Geoarchaeological evidence from the Upper Mississippi alluvial valley suggests that the pimple mounds in that area began forming before 5000 B.P. (i.e., during the

TABLE 6-8

Backhoe Trenches Excavated within the Doctors Creek Drainage

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
<i>Channel</i>					
144	2.80	0.70	0.60	C	10YR3/1
			1.75	C, Ca	10YR4/1
148	3.00	0.70	1.80	C	10YR3/1; 10YR4/1 mottles
<i>Floodplain</i>					
142	3.20	0.70	1.43	C	7.5YR3/0; 2.5YR3/0 mottles
143	2.80	0.70	1.60	C	10YR3/1
145	3.00	0.70	0.90	C	10YR3/1
			1.90	C, Ca	10YR4/1
146	3.00	0.70	0.90	C	10YR3/1
			1.90	C, Ca	10YR4/1
147	3.30	0.70	1.25	C	10YR3/1
			1.40	C	10YR4/1
149	3.20	0.70	1.25	C	10YR3/1
			1.40	C	10YR4/1
153	3.30	0.70	0.45	C	10YR4/1
			0.90	C	10YR3/2
			1.45	C	10YR5/2
154	3.20	0.70	0.40	CLL	10YR4/1
			0.60	C	10YR4/1; 10YR7/1 mottles
			1.30	C	10YR4/1; 10YR6/1 mottles
			1.70	C	10YR3/1; 2.5Y6/4 mottles
166	3.00	0.70	1.30	CLL	7.5YR3/0
167	2.80	0.70	1.30	CLL	7.5YR3/0
168	3.00	0.70	1.40	CLL	7.5YR3/0
171	3.20	0.70	1.35	CLL	7.5YR3/0
<i>Floodplain Rises</i>					
150	3.10	0.70	0.35	CLL	10YR5/2
			1.10	C	10YR6/1
			1.90	C	10YR6/1; 7.5YR5/8 mottles

TABLE 6-8 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
151	3.30	0.70	0.50	CLL	10YR4/2
			1.10	CLL	10YR5/2
			1.55	CLL	10YR4/2
152	3.40	0.70	0.70	CLL	10YR3/1
			1.25	C, Ca	10YR3/1
155	2.80	0.70	0.70	C	10YR3/1; 10YR6/1 mottles
			1.50	C	10YR3/1
156	2.80	0.70	0.40	SL	10YR4/2
			0.60	SL	10YR4/2; 10YR7/1 mottles
			1.20	C	10YR3/1; 2.5Y6/4 mottles
			1.45	C	10YR4/2; 10YR7/1 mottles
157	2.80	0.70	0.40	SL	10YR4/2
			0.60	SL	10YR4/2; 10YR7/1 mottles
			1.20	C	10YR3/1; 2.5Y6/4 mottles
			1.45	C	10YR4/2; 10YR7/1 mottles
158	3.00	0.70	0.20	CSL	10YR3/2
			0.80	C	10YR4/1; 2.5YR4/8 mottles
			1.20	C	10YR7/1
			1.40	C	10YR3/1; 10YR7/1 mottles
159	3.00	0.70	0.30	CSL	10YR7/1; 10YR3/1 mottles
			0.40	CSL	10YR4/2
			0.50	CSL	10YR7/1
			1.20	C	10YR4/2; 2.5Y6/4, 5YR5/8 mottles
			1.60	C	10YR7/1; 10YR4/2, 7.5YR5/8 mottles
160	3.00	0.70	0.30	CSL	10YR7/1; 10YR3/1 mottles
			0.40	CSL	10YR4/2
			0.50	CSL	10YR7/1
			1.20	C	10YR4/2; 2.5Y6/4, 5YR5/8 mottles
			1.60	C	10YR7/1; 7.5YR5/8 mottles
161	2.90	0.70	0.15	FSL	10YR6/2
			0.25	CSL	10YR6/2
			0.65	SL	10YR7/1
			0.75	C	10YR4/1; 2.5YR4/8 mottles

TABLE 6-8 (cont.)

Zone BHT	Length (m)	Width (m)	Depth (m)	Texture	Munsell Color
162	3.20	0.70	0.15	FSL	10YR6/2
			0.25	CSL	10YR6/2
			0.65	SL	0YR7/1
			1.15	C	10YR4/1; 2.5YR4/8 mottles
163	3.30	0.70	0.30	CLL	10YR3/1; 10YR6/2 mottles
			0.50	C	10YR3/1
			1.00	C	10YR5/1
			1.60	C	10YR6/1; 7.5YR5/8 mottles
164	3.00	0.70	0.30	CLL	10YR3/1; 10YR6/2 mottles
			0.50	C	10YR3/1
			1.00	C	10YR5/1
			1.50	C	10YR6/1; 7.5YR5/8 mottles
165	3.10	0.70	0.15	FSL	10YR6/2
			0.50	CLL	10YR4/1
			0.80	CLL	10YR6/1; 7.5YR5/8 mottles
			1.50	C	10YR7/1; 7.5YR5/8 mottles
169	3.20	0.70	0.30	CSL	10YR4/2
			0.60	C	10YR5/1; 7.5YR5/8 mottles
			1.10	C	10YR6/1; 7.5YR5/8 mottles
			1.80	C, Fe	10YR7/1
170	3.20	0.70	0.20	CSL	10YR4/2
			0.40	CLL	10YR3/2
			0.70	C	10YR5/1; 2.5YR4/8 mottles
			0.85	C	10YR7/1; 2.5YR4/8 mottles
<i>Slope/Upland</i>					
141	3.20	0.70	0.50	CL	10YR4/1
			0.80	C	10YR4/2; 2.5Y6/2, 5YR5/8 mottles
			1.30	C	10YR6/2; 2.5Y6/2, 5YR5/8 mottles

KEY: FSL = fine sandy loam; SC = sandy clay; SCL = sandy clay loam; C = clay; CLL = clay loam; CSL = clay silt loam; SSL = sandy silt loam; SL = silt loam; S = silt; G = gravel; Ca = calcium carbonate concretion; LS = limestone or marl; Fe = ferrous concretion.

Atlantic climatic episode), and that many subsequently were occupied by Native Americans and, later, by Anglo-European settlers (O'Brien, Lyman, and Holland 1989: 92-93). Bousman, Collins, and Pertulla (1988) propose that the

pimple mounds in the Cooper Lake study area were formed by gas vents resulting from tectonic activity. The presence of Late Archaic to Late Prehistoric and Historic period artifacts in the Cooper Lake pimple mounds suggests that they

formed by at least 2000 B.P. Unfortunately, neither diagnostic cultural materials nor absolute radiometric assays have been obtained from these geomorphic features to aid in their interpretation.

Doctors Creek: Stream Channel

A maximum of two natural strata were identified along the Doctors Creek stream channel. A single very dark gray (10YR3/1) clay with dark gray (10YR4/1) mottles was identified in BHT 148. This culturally sterile stratum extended from the ground surface to a maximum excavated depth of 1.8 m below ground surface.

Two natural strata were identified in BHT 144 (Figure 6-16, see Table 6-8), excavated 25 m (82 ft) east of Doctors Creek and south of Highway 24. These strata are described below from older (lower) to younger (upper).

Stratum I is a dark gray (10YR4/1) clay. Calcium carbonate concretions are common. A water-worn, possibly battered cobble was recovered from this stratum at 1.4 m below ground surface, but no other materials suggesting a cultural presence were noted. The upper boundary of Stratum I is diffuse and occurs at 60 cm below ground surface. The stratum was excavated to a maximum depth of 1.75 m below ground surface.

Stratum II is a very dark gray (10YR3/1) clay which is continuous along the Doctors Creek channel. It is culturally sterile.

Doctors Creek: Floodplain

Thirteen backhoe trenches were excavated in this physiographic zone (see Figure 6-15, see Table 6-8). A minimum of one and a maximum of four natural strata were identified in these trenches. The representative profile selected for this zone is from BHT 154 (see Figure 6-16). A deep unit excavated in this same zone at site 41DT124 and reported in Ferring (1993:E-20) is shown in Figure 6-16 for comparative purposes. The four natural strata identified in BHT 154 are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a very dark gray (10YR3/1) clay with light yellowish brown (2.5Y6/4) mottles.

It has a diffuse upper boundary at 1.3 m below ground surface and was excavated to a maximum depth of 1.7 m below ground surface. Stratum I is culturally sterile.

Stratum II is a dark gray (10YR4/1) clay with light gray (10YR7/1) mottles. Its indistinct upper boundary occurs 60 cm below ground surface. Stratum II is culturally sterile.

Stratum III is a dark gray (10YR4/1) clay with light gray (10YR7/1) mottling. Its indistinct upper boundary occurs 40 cm below ground surface. Stratum III is culturally sterile.

Stratum IV is a dark gray (10YR4/1) clay loam. Apparently a plow zone, the texture of this stratum is slightly different from that of underlying Stratum III. Stratum IV is culturally sterile in BHT 154.

Doctors Creek: Floodplain Rises

In total, 16 backhoe trenches were excavated on the Doctors Creek Floodplain Rises physiographic zone (see Figure 6-16, see Figure 6-8). Backhoe Trench 159, in which five natural strata were identified, provides a representative profile for the zone (see Figure 6-16). These strata are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a light gray (10YR7/1) clay with dark grayish brown (10YR4/2) and strong brown (7.5YR5/8) mottles. It has a clear upper boundary at 1.2 m below ground surface. Stratum I was excavated to a maximum depth of 1.6 m below surface. Stratum I is culturally sterile.

Stratum II is a dark grayish brown (10YR4/2) clay with yellowish brown (2.5YR6/4), light gray (10YR7/1), and yellowish red (5YR5/8) mottles. It has a clear upper boundary at 50 cm below surface. Stratum II is culturally sterile.

Stratum III is a light gray (10YR7/1) loam. It has clear upper boundary at 40 cm below ground surface. Stratum III is culturally sterile.

Stratum IV is a dark grayish brown (10YR4/2) loam. It has a clear upper boundary at 30 cm below surface. Stratum IV is culturally sterile.

Stratum V, the surface horizon, is a light gray (10YR7/1) loam with very dark gray (10YR3/1) mottles. Stratum V is culturally sterile.

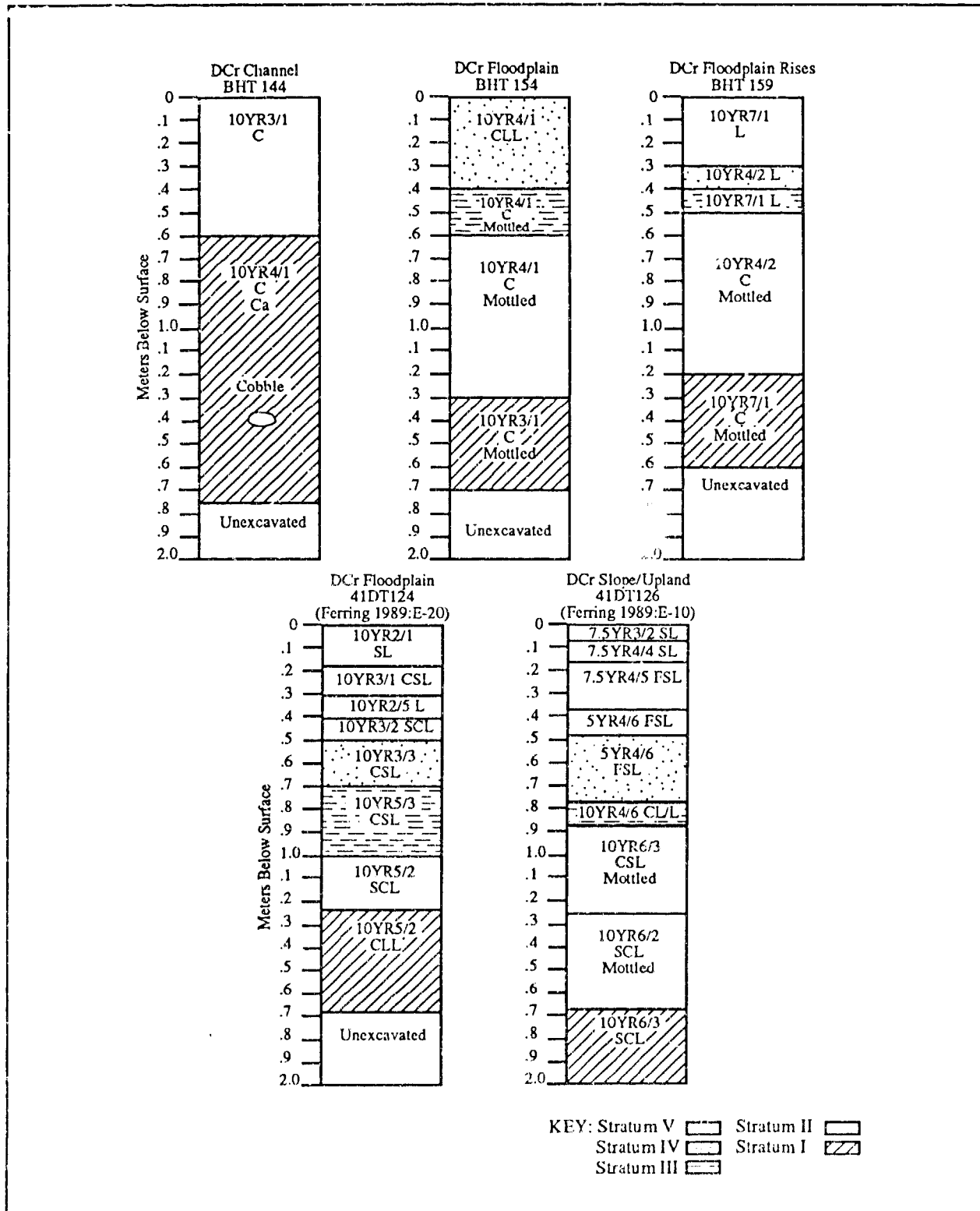


Figure 6-16. Representative stratigraphic profiles from the Cooper Lake Delivery Order Number 7 study area compared to profiles obtained from sites 41DT124 and 41DT126 on Lower Doctors Creek (from Ferring 1993:Figure E-5; Table E-5).

Using detailed particle-size analysis of the soils and sediments at site 41DT124, Ferring (1993:Table E-5) described a profile very similar to that characterized in the present study via field methods only (see Figure 6-16). Ferring's (1993) analysis indicated that the silt component of the soils in this physiographic zone was not detected by ARP field personnel, who differentiated the texture of strata on the basis of touch alone. The results from the deep testing via backhoe trenching and description of the soil profiles using field methods exclusively do indicate, however, that gross characterizations of soil and sediment profiles can be used to understand the various sediment packages within the Delivery Order Number 7 study area.

Doctors Creek: Slope/Upland

A single backhoe trench (BHT 141) was excavated within this physiographic zone, immediately adjacent to the boundary of the Delivery Order Number 7 study area and within the mapped limits of site 41DT170 (see Figures 6-15 and 6-16, see Table 6-8; see Chapter 8, this volume). A deep unit excavated in this same zone at 41DT126 and reported in Ferring (1993:Figure E-5) is shown in Figure 6-16 for comparative purposes. Two other backhoe trenches (i.e., BHTs 142 and 143) excavated on and in the vicinity of this site were emplaced on the floodplain of an intermittent stream that cuts through this broad-sloping area. The three strata identified in BHT 141 are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a gray (10YR6/2) clay with light brownish gray (2.5YR6/2) and yellowish red (5YR5/8) mottles. Calcium carbonate concretions, indicative of fluctuating water regimes, are common. It has a diffuse upper boundary at 0.8 m below the ground surface and was excavated to a maximum depth of 1.3 m below the surface. This level was found to be culturally sterile.

Stratum II is a dark gray (10YR4/2) clay with light brownish gray (2.5YR6/2) and yellowish red (5YR5/8) mottles. Small water-worn pebbles and calcium carbonate concretions are present. Cultural materials, which are restricted to the upper boundaries of this stratum, may be intrusive (via bioturbation?) from lower portions of Stratum III.

Stratum III is the surface soil horizon composed of a dark gray (10YR4/1) clay loam. Cultural materials (flakes, fire-cracked rock, and bone) were mapped in the walls of BHT 141 and occurred from 10 cm to 46 cm below the ground surface.

OVERVIEW

Sites Identified and/or Investigated During Deep Testing

Deep testing carried out under Delivery Order Number 7 identified and/or investigated a total of 14 archaeological sites. These sites are listed by study area segment (or drainage) in Table 6-9. Backhoe excavations were conducted on five previously recorded sites including 41HP159 and 41HP162 (both on the Finley Branch fan); 41DT6 (on Lost Ridge); and 41DT141 (on the Middle Sulphur River channel). The fifth previously recorded site, 41HP119, originally reported on the Merrit Creek floodplain, was not relocated by the present study.

Three newly registered sites evincing no surface manifestations (i.e., sites 41HP179, 41DT161, and 41DT163) were identified via the deep testing program exclusively. Site 41HP179 was identified ca. 90 cm below ground surface in the Merrit Creek floodplain/channel. Site 41DT161 was identified ca. 25-65 cm below ground surface on the unchannelized Middle Sulphur River. Site 41DT163 was identified ca. 22-41 cm below ground surface within the slope/upland zone of the Johns Creek drainage. All three sites were examined via shovel testing following their identification during the deep testing operation.

Six other sites evincing varying degrees of surface manifestations (i.e., 41HP180, 41HP182, 41HP183, 41DT164, 41DT170, and 41DT174) were further investigated via backhoe trenching and found to be buried under a relatively thick package of alluvium. Site 41HP180 was identified ca. 40 cm below ground surface in the floodplain/slope zone of the Merrit Creek Valley. Sites 41HP182 and 41HP183 were identified ca. 52 cm and 53 cm below ground surface, respectively, in the floodplain/slope zone of the South Sulphur River Valley, within the Emblem

TABLE G-9

Summary of Sites Identified and/or Investigated via Deep Testing
at Cooper Lake under Delivery Order Number 7, by Drainage

Drainage	Setting	Site	Reg./ New	Surface Evidence	Testing Methods
Finley Branch	Floodplain/ Slope	41HP159	Reg.	Yes ^a	BHTs, 1.5m x 1.7m units
	Floodplain/ Slope	41HP162 ^b	Reg.	Yes	BHTs, shovel tests
Merrit Creek	Floodplain	41HP119	Reg.	Yes	BHTs, pedestrian survey
	Floodplain	41HP179	New	No	BHTs, shovel tests
	Floodplain	41HP180	New	Yes	BHTs, pedestrian survey, shovel tests
South Sulphur R.	Floodplain/ Slope	41HP182	New	Yes	BHTs, pedestrian survey, shovel tests
	Floodplain/ Slope	41HP183	New	Yes	BHTs, pedestrian survey, shovel tests
Middle Sulphur R.	Floodplain	41DT6	Reg.	Yes	BHTs, pedestrian survey, shovel tests
	Channel	41DT141	Reg.	No	BHTs, pedestrian survey
	Channel	41DT161	New	No	BHTs, shovel tests
Johns Creek	Slope/ Upland	41DT163	New	No	BHTs, shovel tests
	Slope/ Upland	41DT164	New	Yes	BHTs, pedestrian survey shovel tests
Doctors Creek	Slope/ Upland	41DT170	New	Yes	BHTs, pedestrian survey
	Slope	41DT174	New	Yes	BHTs, pedestrian survey, shovel tests

^a Prehistoric ceramic sherds, presumably redeposited from 41HP159, were observed along the banks of the artificial Finley Channel in the vicinity of that site by Dr. Reid Ferring in 1987. Fire-cracked rock was also observed in the general vicinity by ARP personnel during fieldwork at the site (see Chapter 8).

^b Reported in Turney and Bohlin (1993).

Bottom and Merrit Creek drainages. Site 41DT164 was identified ca. 22-56 cm below ground surface along the slope of the Johns Creek Valley. Site 41DT170, located on a slope/upland along Doctors Creek, evinced a considerable surface scatter of cultural materials, and its buried cultural component was identified at 10-65 cm below ground surface. The final site investigated via deep testing, 41DT174, situated on the Doctors Creek slope physiographic zone, was comprised of shallow cultural deposits 9-25 cm below the ground surface.

Soil Series at the Surface

Six soil associations are present in the Delivery Order Number 7 study area, including the Kaufman-Gladewater, Wilson-Bazette, Trinity-Kaufman, Wilson-Normangee-Crockett, Annona-Freestone-Woodtell, and Nahatche (Table 6-10). The general locations of these associations are shown in Figure 6-17. The relationship between their constituent soils, regional bedrock (or parent material), and topographic situation is shown in Figure 6-18.

The Trinity-Kaufman-Gladewater series includes the principal soils which have formed on the alluvium infilling the valleys of the South Sulphur River and its major tributaries. Clay dominates in these soils. The Trinity clay (Figure 6-19) is the most common soil series along stream channels and floodplains, and consists of A-horizon soils. The Kaufman soil series also consists of deep A-horizon soils. The taxonomic classification of the Kaufman and Trinity is the Vertisol Order (USDA 1975), which includes soils saturated up to 1 m deep for one month or more each year. When these soils dry, large cracks are formed, confirming their assessment as having high shrink-swell potential (due to their montmorillonitic clay content). These soils are young and formed under forest.

The Trinity series soils are only present on the alluvial deposits along the South Sulphur River. The Kaufman and related Gladewater (see Figures 6-17 and 6-18) series are present along the Merrit Creek Channel, Middle Sulphur River channel, Johns Creek channel, and Doctors Creek channel. The backhoe trench profiles from the Emblem Bottom, the Middle Sulphur River,

Jernigan Creek, Johns Creek, and Doctors Creek indicate that these soils developed similarly across the entire region sampled. The soils developed in the most recent alluvial unit in Cooper Lake, possibly dating later than the assay of 2860 ± 70 B.P. (uncorrected; SMU-1983) obtained on charcoal from site 41HP118 (Fecting 1993:33-34), or the assay of 2350 ± 70 B.P. (Beta-17401) obtained from site 41ET141 (Gadus et al. 1991:27).

The soils that have formed laterally to the Trinity-Kaufman-Gladewater series at the fringes of the floodplains and bases of slopes are more ancient and consist of the Wilson-Bazette, Wilson-Normangee-Crockett, and Annona-Freestone-Woodtell associations. Backhoe excavations conducted in the various physiographic areas within the Jernigan, Johns, and Doctors creek drainages revealed well-developed soil profiles in remnant knolls (risers) and slope upland areas. The Wilson, Normangee, and Crockett soils are the dominant soils north of the South Sulphur River floodplain (see Figure 6-17). The A-horizon of these soils is dominantly loam or clay-loam as opposed to the clay dominance throughout the profiles of the Trinity-Kaufman-Gladewater series (Figure 6-20). The shrink-swell potential of the upper 10-20 cm of the series is low to moderate, but the underlying horizons are montmorillonitic-clay dominated, leading to the development of deep cracks in these soils when they are subjected to prolonged drying. These soils are in the Alfisol Order.

The Wilson soil (see Figure 6-20) is an aqualf, which is a gray mottled soil formed under a saturated moisture regime. This is an ancient soil which formed under prairie.

The Normangee soil (see Figure 6-20) formed from shale parent material. It also formed under grasses.

The Crockett soil (see Figure 6-20) has a sandier epipedon which formed on land surfaces dating to the Pleistocene or earlier. The soil formed under a combination of forest and grassland vegetation, similar to the post oak savannah noted in the original land surveys. Today there remain pockets of this post oak savannah which, although disturbed, still reflect the conditions of this earlier environment. It has been demonstrated that all of the pre-Civil War

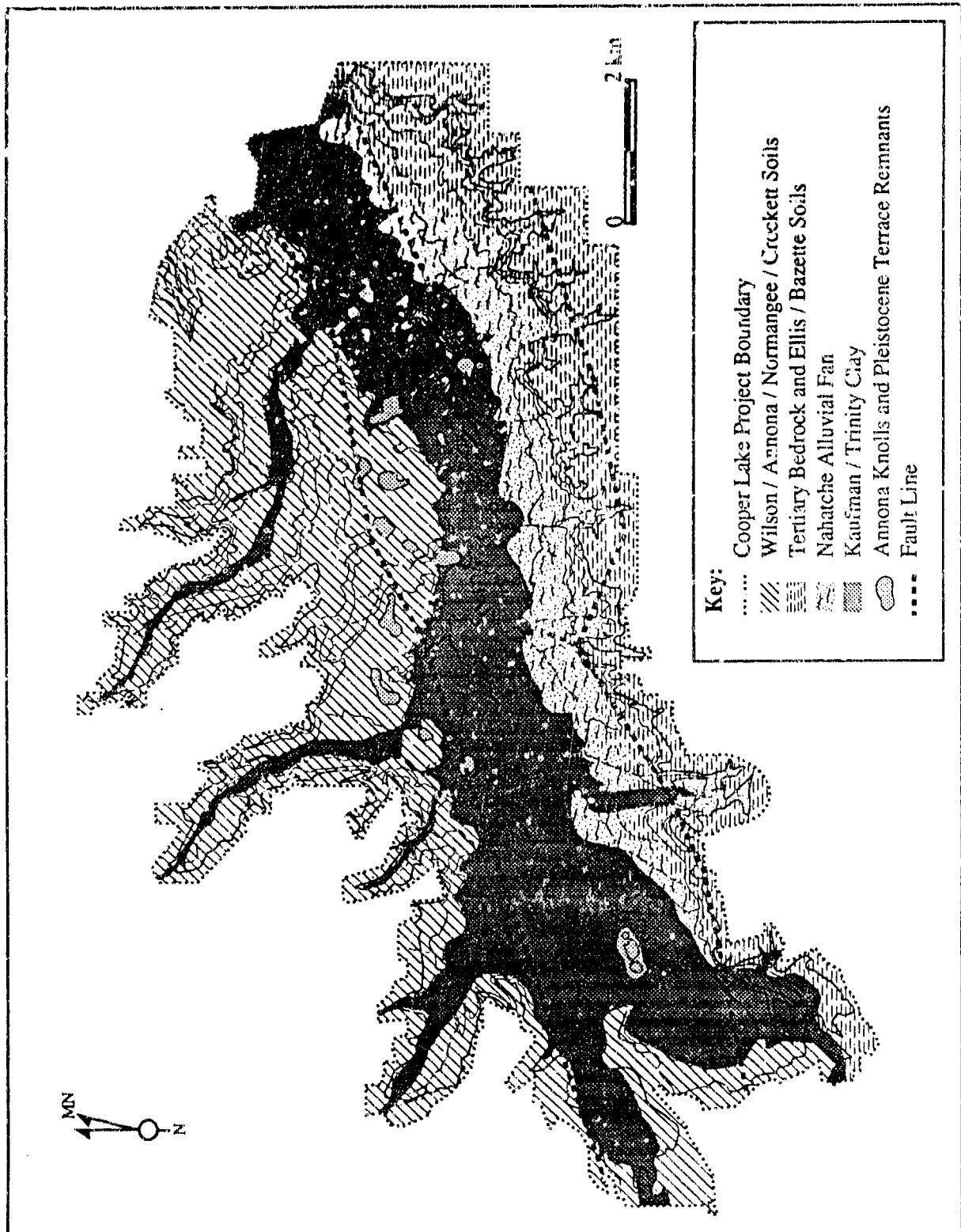


Figure 6-17. General locations of major soil associations in the Cooper Lake Delivery Order Number 7 study area.

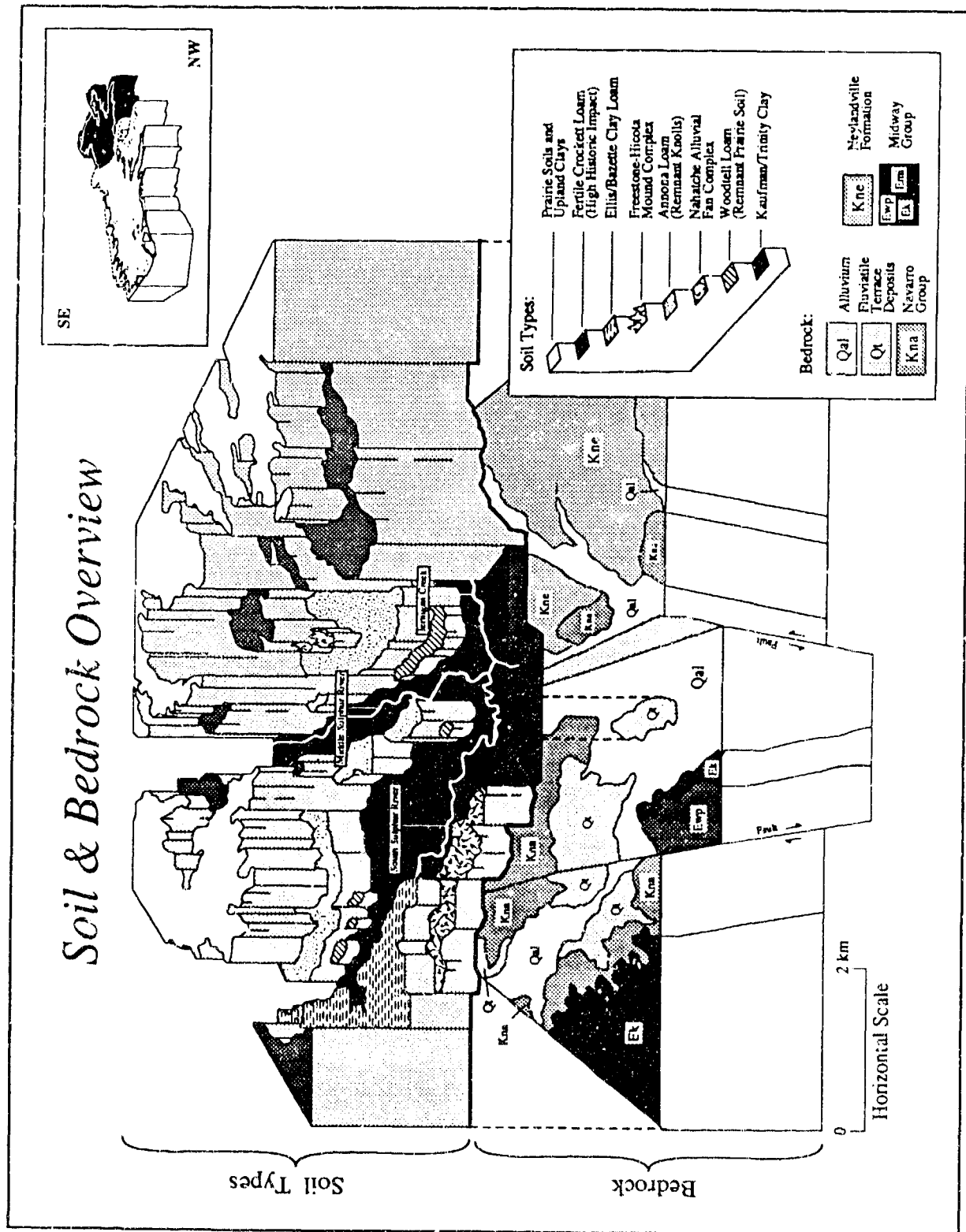


Figure 6-18. Schematic profile of bedrock geology (lower) and soils (upper) in the southwestern portion of Cooper Lake.

TABLE 6-10

Descriptive Profiles of Principal Soil Types in the Delivery Order Number 7 Study Area,
by Soil Association

Soil Association Soil Type	Ubiquity	Description
Kaufman-Gladewater	4 %	(of total soil survey area)
Kaufman	41 %	A11; 0-10 in; black (10YR 2/1) clay; gradual wavy boundary A12; 10-64 in; black (10YR 2/1) clay; diffuse wavy boundary Cca; 64-84 in; very dark gray (10YR 3/1) clay
Gladewater	35 %	A11; 0-5 in; black (10YR 2/1) clay; wavy boundary A12; 5-9 in; very dark gray (10YR 3/1) clay; gradual wavy boundary B21g; 9-28 in; dark gray (10YR 4/1) clay, mottled; gradual wavy boundary B22g; 28-50 in; dark gray (10YR 4/1) clay; gradual wavy boundary Cg; 50-65 in; dark gray (10YR 4/1) clay
Nahatche (minor)	24 %	—
Wilson-Bazette	8 %	(of soil survey area)
Wilson	37 %	Ap; 0-5 in; very dark gray (10YR 3/1) clay loam; abrupt wavy boundary B21tg; 5-22 in; very dark gray (10YR 3/1) clay; gradual wavy boundary B22tg; 22-40 in; very dark gray (10YR 3/1) clay; gradual wavy boundary B23tg; 40-54 in; very dark grayish brown (2.5YR 4/2) clay B3g; 54-66 in; gray (10YR 5/1) clay; gradual wavy boundary Eg; 66-82 in; gray (10YR 6/1) shale and clay
Bazette	25 %	A1; 0-4 in; very dark grayish brown (10YR 3/2) clay loam; clear smooth boundary B21t; 4-22 in; light olive brown (2.5Y 5/4) clay; gradual wavy boundary B3; 22-28 in; olive brown (2.5Y 4/4) clay; gradual wavy boundary C; 28-60 in; clay and shale
Crockett-Ellis (minor)	38 %	—
Trinity-Kaufman	10 %	(of total soil survey area)
Trinity	5 %	Ap; 0-7 in; very dark gray (10YR 3/1) clay; abrupt smooth boundary
Kaufman	33 %	(see Kaufman-Gladewater Association, above)

TABLE 6-10 (cont.)

Soil Association Soil Type	Ubiquity	Description
Other	8%	—
Wilson-Normangee- Crockett	22%	(of total soil survey area)
Wilson	—	(see Wilson-Bazette Association, above)
Normangee	26%	Ap; 0-7 in; dark brown (10YR 3/3) clay loam; clear wavy boundary B21t; 7-16 in; brown (10YR 4/3) clay; gradual wavy boundary B22t; 16-28 in; yellowish brown (10YR 5/4) clay, mottled; diffuse wavy boundary B23t; 28-38 in; grayish brown (10YR 5/2) clay, mottled; gradual wavy boundary B24t; 38-48 in; light olive brown (2.5Y 5/4) clay, mottled; gradual wavy boundary B3; 48-57 in; olive (5Y 5/3) clay, mottled; C shale
Crockett	22%	A1; 0-8 in; very dark grayish brown (10YR 3/2) loam; abrupt wavy boundary B21t; 8-17 in; brown (10 yr 4/3) clay, mottled; diffuse wavy boundary B22t; 17-29 in; light olive brown (2.5Y 5/4) clay, mottled; diffuse wavy boundary B23t; 29-39 in; olive (5 y 5/3) clay; diffuse wavy boundary B24t; 39-51 in; olive brown (2.5Y 4/4) clay; wavy boundary B3ca; 51-59 in; light olive brown (2.5Y 5/4) clay; clear wavy boundary Cca; 59-73 in; light gray (2.5Y 7/2) loamy marl/shale, mottled
Annona-Freestone- Woodtell	23%	(of total soil survey area)
Annona	27%	A1; 0-4 in; dark grayish brown (10YR 4/2) loam; clear wavy boundary A2; 4-9 in; light yellowish brown (10YR 6/4) loam; abrupt wavy boundary B21t; 9-16 in; dark red (2.5YR 3/6) clay; gradual wavy boundary B22t; 16-26 in; light brownish gray (2.5YR 6/2) clay; gradual wavy boundary B23t; 26-42 in; gray (10YR 6/1) clay; gradual wavy boundary B24t; 42-55 in; yellowish brown (10YR 5/4) clay; gradual wavy boundary B25t; 55-75 in; gray (10YR 6/1) clay, mottled

TABLE 6-10 (cont.)

Soil Association Soil Type	Ubiquity	Description
Freestone	19%	A1; 0-6 in; brown (10YR 5/3) fine sandy loam; clear smooth boundary A2; 6-16 in; light yellowish brown (10YR 5/6) loam; gradual wavy boundary B21t; 16-23 in; yellowish brown (10 Yr 5/6) loam; gradual wavy boundary B22t; 23-33 in; yellowish brown (10YR 5/6) clay loam; gradual wavy boundary B23tg; 33-44 in; light gray (10 Yr 6/1) clay loam, mottled; diffuse wavy boundary B24tg; 44-59 in; light brownish gray (2.5Y 6/2) clay, mottled; gradual wavy boundary B25t; 59-80 in; light brownish gray (2.5Y 6/2) clay loam
Woodtell	11%	—
Other	43%	—
Nahatche	7%	(of total soil survey area)
Nahatche	95%	A1; 0-7 in; dark grayish brown (10YR 4/2) clay loam; clear smooth boundary C1g; 7-13 in; grayish brown (10YR 5/2) loam; gradual boundary C2g; 13-34 in; grayish brown (10YR 5/2) clay loam, mottled; clear smooth boundary C3g; 34-50 in; dark gray (10YR 4/1) clay loam, mottled; gradual boundary C4g; 50-65 in; dark gray (10YR 4/1) clay loam, mottled

Note: Descriptions provide data on horizon, depth below ground surface, color and texture, and lower interface. Ubiquity listed for each soil type is percentage *within* each association.

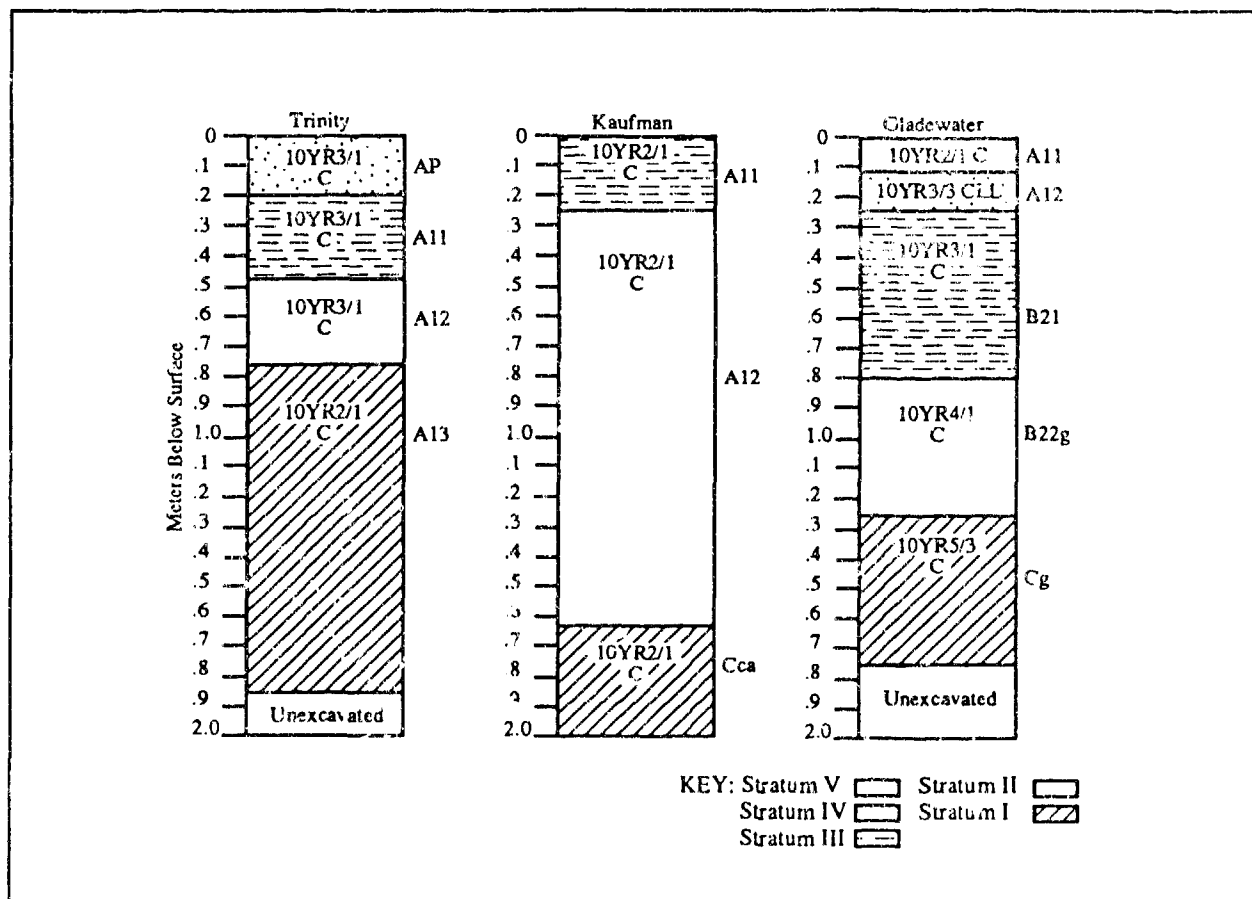
Source: Lane (1977), Ressel (1979).

farmsteads in Cooper Lake are situated directly on or adjacent to Crockett soils (Jurney 1993).

South of the South Sulphur River the floodplain sediments identified in the backhoe excavations are similar to the Kaufman and Trinity soils, except for those sediments noted along Finley Branch (see Mandel 1993) and the South Sulphur River floodplain fringe from Emblem Bottom to Merrit Creek. Along the south wall of the valley, a prominent unit, the Nahatche, is present (see Figures 6-17 and 6-18). The Nahatche (Figure 6-21) is a loamy soil developed in

alluvium along tributary stream courses and in what has been tentatively interpreted to be a coalescing alluvial fan complex along the southern margin of the South Sulphur Creek Valley. This unit did not extend into the Merrit Creek Valley, but it is present along the floodplain apron at the base of the escarpment extending from the Emblem Creek bottom to Merrit Creek (see Figure 6-6).

The upland soils in the area south of the Sulphur River are primarily the Bazette and Ellis clays, with shallow epipedons and exposed shale



and clay parent materials (see Figures 6-18, 6-20, and 6-21). There is no preservation of sites in these soils, since they are maintained in equilibrium, except where eroded away.

Geomorphologic Field Conference of Cooper Lake Investigators

Professional geomorphologists Dr. Rolfe Mandel and chapter co-author Dr. S. Christopher Caran both visited the study area during the course of these investigations when their schedules permitted. An informal conference, which presented the results of backhoe investigations in the Finley Branch area and summarized all investigations conducted to date, was held in December 1989. Dr. Reid Ferring, Dr. Rolfe Mandel, Dr. S. Christopher Caran, Britt Bousman, David Journey, Randall Moir, Frank Winchell, Jeffery Bohlin, and Erwin Roemer attended this

conference, which played a pivotal role in the present geomorphological research.

Ferring provided a synthesis of his work in the Delivery Order Number 4 study area, the North Sulphur River, and other areas of the reservoir. Site 41HP159 and Finley Branch were visited. Mandel discussed the soil genesis of the Finley Branch fan and site 41HP155. Chapter co-author Caran provided a summary of the deep testing at site 41HP159. Bousman's summary of previous investigations provided an interface with recent work by Prewitt and Associates, Inc.

Ferring's overview of the Cooper Lake geoarchaeological work indicated that the most effective expenditure of effort at Cooper Lake would be to investigate the depositional environments at specific sites and their associated formation processes. Definition of the symmetry of alluvial units also was recommended as a topic of study. This work was conducted by Prewitt and

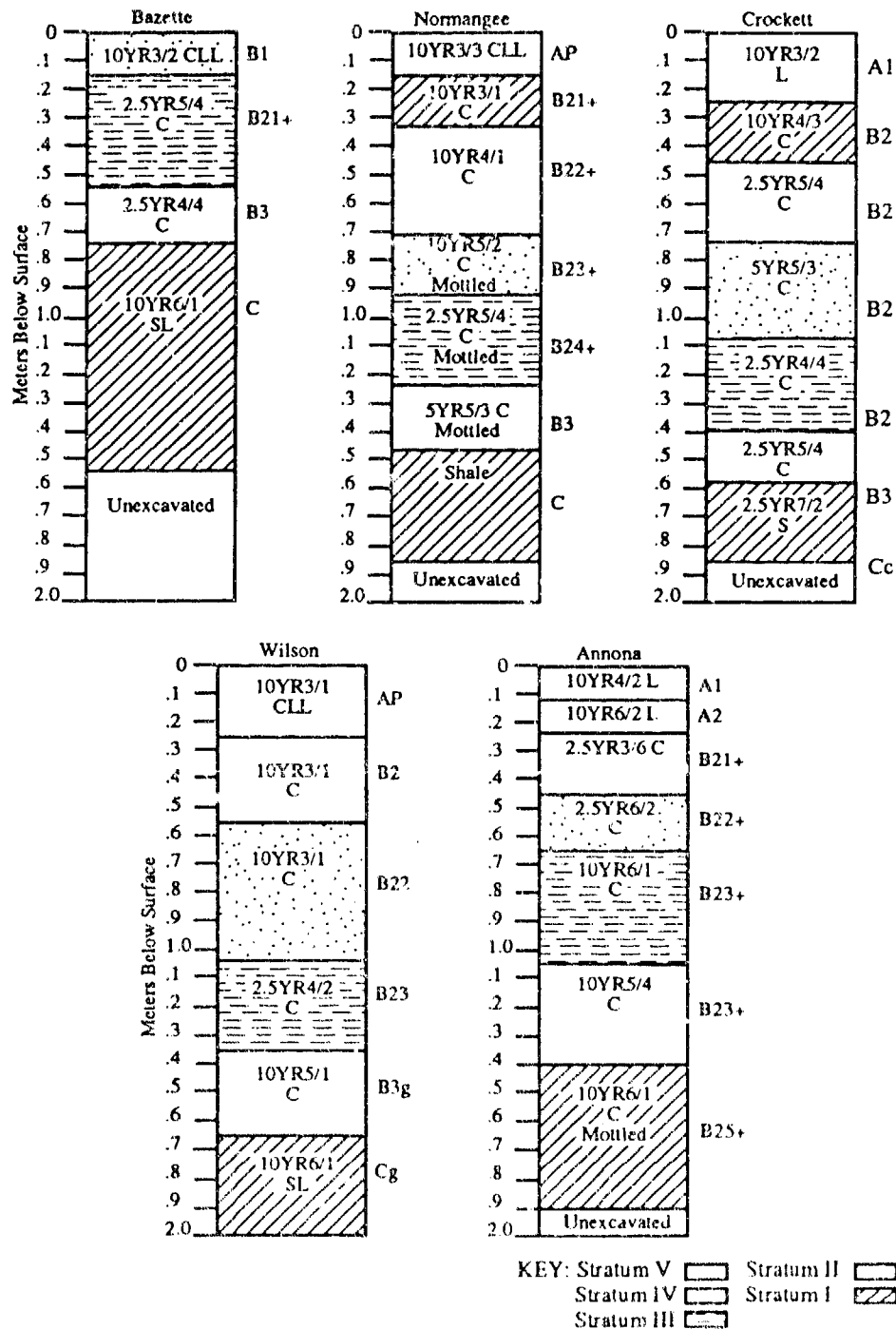


Figure 6-20. Schematic profiles and horization of the Bazette, Normangee, Crockett, Wilson, and Annona soils.

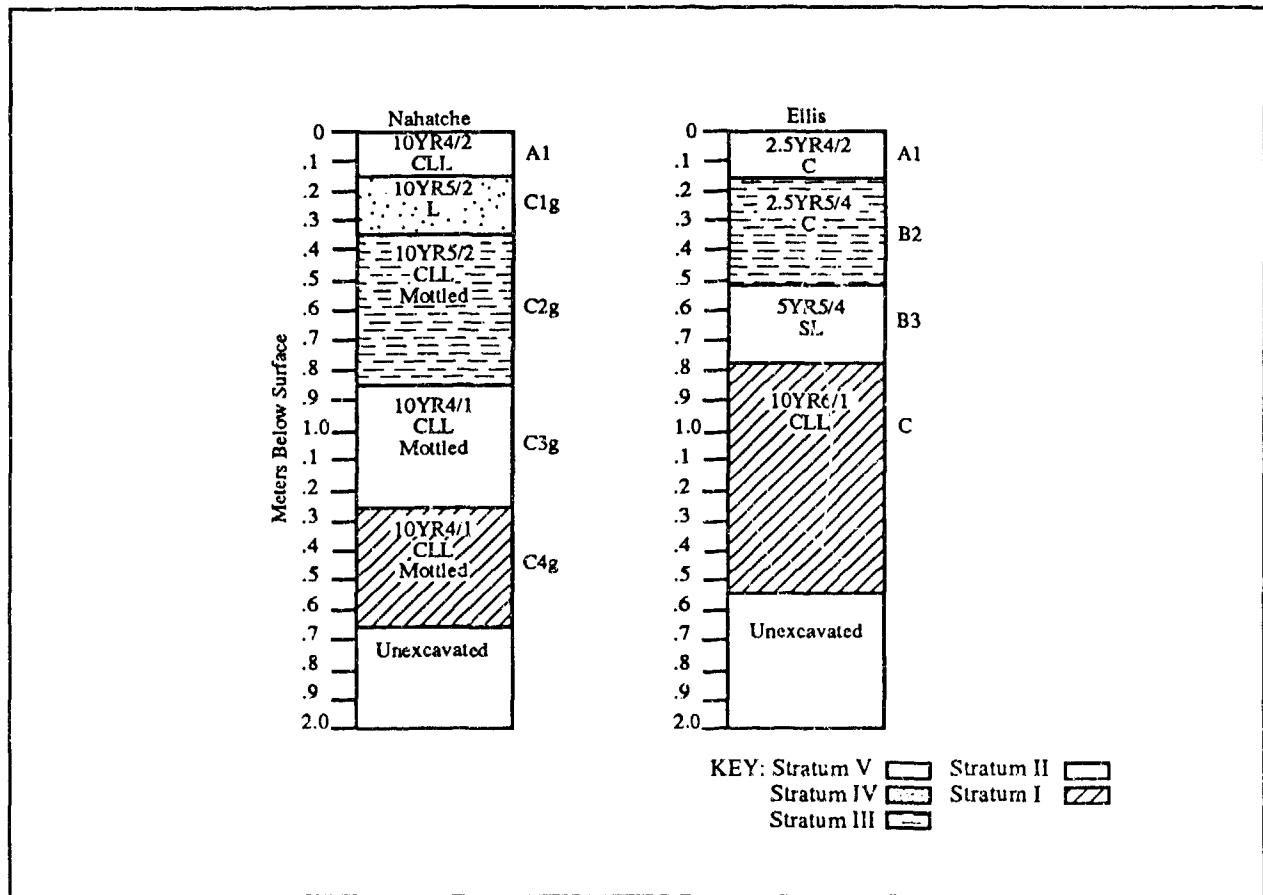


Figure 6-21. Schematic profiles and horizonation of the Nahatche and Ellis soils.

Associates, Inc. The deep testing conducted under Delivery Order Number 7 focused on the buried foot of floodplain rises at Lost Ridge and the floodplain margin (i.e., the Emblem to Merrit Escarpment), areas that Dr. Ferring indicated had the highest potential for site preservation. There was a general consensus that enough shallow midden sites dating to the Late Prehistoric period had been investigated.

New directions recommended for archaeological work in the greater study area focused on the need for absolute dating of past landscapes, focusing specifically in the early to middle Holocene. Unfortunately, no radiocarbon samples from suitable contexts were available for the present study. A coring program for the Finley Branch fan and floodplain was suggested to date sediment infilling with Carbon Isotope analysis. Culture-bearing deposits at sites 41HP159 and

41HP175, both discovered during trackhoe investigations under Delivery Order Number 6, were recommended as ideal for analysis of landscape formation. These sites were subsequently investigated by Prewitt and Associates, Inc.

Areas that were discussed in the Cooper Lake Research Design for paleoenvironmental reconstruction appear to have low potential to yield significant data. Pollen preservation is poor, and the nearest good pollen sequence is from Buck Creek Marsh. Snails have not been preserved in the Sulphur River sediments. Therefore, it was generally agreed that the best means to perform paleoenvironmental reconstruction was a combined archaeological and geomorphological approach to sites known to be present in key landforms such as the Finley Branch fan.

CONCLUSIONS

The soil profile descriptions generated in this study represent only general trends in the horizontal and vertical stratification of sediments and soils in the Cooper Lake Basin. In addition to the varying contributions of stream channel deposition and overbank processes such as sheet flow and flood deposition of the various Cooper Lake tributaries, tectonic forces have affected the drainage pattern and infilling since the Pleistocene minimum base level. Examinations of avocational collections (see Chapter 9, this volume) indicate that Pleistocene sediments, megafauna, and Paleo-Indian materials are exposed up the Sulphur River above Commerce, ca. 10 km (6.2 mi) west of the study area, and throughout the North Fork Sulphur River. Such exposures have not been identified in the study area, possibly due to the fact that the valley to be occupied by Cooper Lake is a partially infilled *é* ben, or block of land downthrown between subparallel faults (Collins and Bousman 1990: 35).

If episodic downfalling continued beyond the end of the Pleistocene, any strata bearing similarly ancient artifacts and other materials may be deeply buried within the downthrown block. It has been suggested that channelization of the North Sulphur River led to its deeply incised channels which expose these materials. Conversely, no similar exposures were noted along the South Sulphur River in the Delivery Order Number 7 study area because it is not as deeply incised in the area of Cooper Lake. In the lake area, the South Sulphur River has undergone only minimal channelization (at the upper end) and, for the most part, flows within a very sinuous, natural channel.

The black (10YR2/1) clay identified in several portions of the Delivery Order Number 7 study area (see above) represents the most recent and relatively extensive stratigraphic unit in Cooper Lake. It is present in all areas of the reservoir that have been investigated to date, and is assumed to be continuous along the present Sulphur River channel, as well as abandoned channels. The dating of this stratigraphic unit, based on humate samples and diagnostic cultural materials (e.g., 41HP118), indicates that the valley fill is less than 3,000 years old. A charcoal sample from the culturally sterile C-horizon at 41HP118

yielded a uncorrected date of 2860 ± 70 yr B.P. (SMU-1983). This sample was obtained from 1.78-2.25 m below surface, thus indicating the rapid deposition in this dam area (Ferring 1993: E-33 to E-34).

The backhoe trenching operation described above augmented the site revisitation and pedestrian survey in the Delivery Order Number 7 study area. Upland settings in the study area have been extensively diminished by historic settlement, agricultural practices, and erosion. Such erosion has in turn provided the mantle of sediment which buried the study area's floodplain margin settings. As most of Cooper Lake has remained fallow since the 1970s, vegetation has now returned to much of the pre-settlement landscape—although it is unlikely that the present vegetation is the same as that of the past and may obscure rather than assist our interpretation of ancient surroundings.

The floodplain/slope physiographic zone has the highest potential for the burial and preservation of cultural deposits. Both alluvial and colluvial sediments have sealed sites within this zone across the entire study area. In the floodplains and along stream channels, sites have also been buried, but stream action and flooding episodes have radically altered some areas (e.g., Jernigan Creek). Therefore, it appears that floodplain channel areas have low potential for the preservation of archaeological sites.

Floodplain rises and the buried edges of these rises on Lost Ridge and along Doctors Creek were investigated via backhoe. Hand excavations were also conducted on the isolated rise east of Friendship. Although these areas were originally assumed by field personnel to have high potential for the preservation of archaeological sites, no buried cultural materials were encountered.

Among the tributaries of the South Sulphur River, Doctors Creek revealed the highest density of sites ($n=20$), followed by the Middle Sulphur River ($n=14$), Johns Creek ($n=12$), and Jernigan Creek ($n=10$). Because some sites within these areas fall on drainage divides, not all have been categorized as to drainage. Floodplain sites covered by dense vegetation (e.g., 41HP180, 41HP182, 41HP183, and 41DT170; see Chapter 8, this volume) but nonetheless evincing some surface manifestations were investigated via

backhoe in these drainages. The Jernigan and Johns creek drainages produced relatively few sites in floodplain areas, but sites were investigated in slope and upland settings. The Merrit Creek floodplain and the Finley Branch fan also contained buried sites. The Finley Branch fan provided the best vertical separation and burial of archaeological sites, confirming the observation (noted above) that the floodplain/slope physiographic zone has the highest potential for site burial and preservation vis-à-vis all other physiographic zones in the Delivery Order Number 7 study area.

As is shown by the important new information obtained from deep testing of the highly significant sites in the Finley Branch fan

(e.g., 41HP159 and 41HP175), backhoe excavations can be conducted safely and cost-effectively to explore large areas of deeply buried sediments normally inaccessible via shovel probing. Moreover, though sediments from the Delivery Order Number 7 deep testing investigations were not screened, even small low-density sites were discovered and/or further investigated, thus indicating that backhoe excavations can be used effectively as a discovery technique. In addition to effectively identifying sites of all sizes and densities, this technique also allows characterization of large-scale sediment packages, which in turn facilitates more refined and controlled investigations of high-priority localities (e.g., 41HP159).

Archival Research and Informant Interviews

Michael S. Harris and David H. Journey

7

ARCHIVAL RESEARCH

The 1850 Census

The Seventh U.S. census for 1850 in Lamar and Red River counties (Steely 1985) and Hopkins County (Carpenter 1969) provides some information on the origin of the population in the greater Cooper Lake area. Table 7-1 lists some known residents of Cooper Lake and its vicinity, with other individuals who were listed in the same precinct in Hopkins County. Table 7-2 lists some known residents of the Cooper Lake vicinity in Delta County. In the Research Design, it is hypothesized that: (1) Delta county will show greater affiliations with the Upper South (Arkansas, Kentucky, Missouri, North Carolina, and Tennessee) than the Lower South (Alabama, Georgia, Louisiana, and South Carolina) and (2) Hopkins County will show greater affiliations with the Lower South.

The census information presented in Tables 7-1 and 7-2 show that 61.1% of the Delta County (Lamar County in 1850) residents of the Cooper Lake vicinity were born in Upper Southern states, 27.7% were born in Lower Southern states, and 11.2% were from the Midwest (i.e., Illinois) and Upper Atlantic regions (i.e., New York). The previous residences, based on child births, were overwhelmingly (75%) from Upper Southern

states. For Hopkins County, 55% of the Cooper Lake vicinity residents were born in the Upper Southern states, 33.3% were born in the Lower Southern states, and 11.2% were born in the Midwest (i.e., Illinois and Indiana) and Middle Atlantic (i.e., Maryland) regions.

Works Progress Administration Farm Surveys

Data available from the WPA tax surveys of Delta and Hopkins counties provide details on the historic landscape at Cooper Lake dating to 1936. This data was collected during Delivery Order Number 6 and employed in conjunction with the Delivery Order Number 7 survey. This information was also synthesized to provide a model of early twentieth century settlements as they apply to both of the above-named study areas.

The WPA survey records have been stored within county clerks offices and courthouse basements throughout Texas. Their curation was not a major concern when the project was completed in 1936; however, preservation and curation are serious problems today. Although of great research value, these records are variable in coverage and have suffered deterioration in most of the courthouses studied to date. The Delta and Hopkins county clerks offices contained only partial records pertaining to the study area.

TABLE 7-1

Data for Heads of Families in the Cooper Lake Vicinity,
Hopkins County, 1850

Name	Age	State of Birth	Previous Residence(s)	Resident of Texas ¹	Total Assets
L. P. Posey	57	Georgia	Tennessee, Missouri	1847	—
J. Sims	51	N. Carolina	Arkansas	—	\$160
J. Lindley	33	Kentucky	Missouri	—	\$100
J. Lindley	68	N. Carolina	—	—	—
John Lindley	38	Kentucky	Missouri	—	—
E. Lindley	28	Kentucky	Missouri	1849	\$186
J. Millholland	27	Kentucky	Missouri	—	—
T. Barrat	40	N. Carolina	Tennessee	1849	\$320
S. Lindley	42	Kentucky	Missouri	1845	\$500
H. Hopkins	36	Indiana	—	1844	\$250
M. Flaharty	52	Maryland	S. Carolina, Tennessee, Arkansas	—	\$500
W. Moore	38	Alabama	Mississippi	1849	\$270
J. Rogers	28	Alabama	—	1844	—
W. Clapp	35	Illinois	—	1839	—
C. Pruett	32	Kentucky	Tennessee, Missouri	1846	\$200
S. Poosey	31	Missouri	—	1847	—
W. Vaden	44	Tennessee	—	1849	\$200
L. Vaden	33	Tennessee	Mississippi	1848	\$200
B. Barns	26	Alabama	—	1849	\$80
E. Johnson	30	Alabama	Louisiana	1840	—
U. Aiguier	45	S. Carolina	—	1838	\$1000
S. Pier	30	Arkansas	—	1844	—
W. Birdwell	27	Alabama	—	1844	\$250
B. Millholland	41	Kentucky	Missouri	1842	\$320
T. Birdwell	36	Alabama	—	1845	\$400
G. Birdwell	56	Georgia	Alabama, Arkansas	1840	\$400
D.D. Spain	45	Kentucky	Tennessee, Mississippi	—	\$800

SOURCE: 1850 United States Census.

¹ Based on birth dates of children in households.

Twentieth Century Farming

The 1936 tax survey matrix employed during the survey of portions of Cooper Lake under Delivery Order Number 6 and Number 7 consists

of a total of 588 individual tract surveys. Of these, 240 individual tract surveys were identified as owner occupied or used and 229 were identified as being occupied by tenants. A number of tracts (119) were not identified and, presumably, may

not have been occupied or used by residents within these tracts.

The best information for the actual number of houses is derived from the home category within the 1936 farm surveys. Of course, the actual boundaries of Cooper Lake do not include all of the land area encompassed by them. Despite this, an approximation of the actual number of pre-1940 homes in the area can be derived and applied to the number of historic properties that were actually recorded. Also, it was possible to date or bracket the date of construction (post-1937) for approximately 90% of all historic sites that have been recorded in Cooper Lake.

In this WPA study, 253 houses were recorded and 335 tracts did not have houses listed, the latter tracts presumably being unoccupied. Landowner's houses comprised 43% of all recorded homes. Home sites were primarily 0.5 acre, 1.0 acre, and 2.0 acres.

Tenant houses occupied 57% of all recorded houses. The most-common home sites were primarily 0.5 acre, 0.5 acre, 1.0 acre, and 2.0 acres in size. Overall, home sites ranged from 0.4-6.0 acres in extent.

The garden average was listed for 189 tracts in the 1936 Tax Surveys. Assuming that 253 tracts were actually occupied, 74% of all houses had use of or access to gardens. The acreages that were reported ranged from 0.12-6.0 acres. A single 67-acre garden tract was listed, but this may be a transcription error. The most frequent garden sizes were 0.5 acre ($n=82$), 1.0 acre ($n=64$), and 0.25 acre ($n=24$). Only 17 tracts had gardens over 1.0 acre.

Farm acreage was listed for 673 individual parcels of land within the 588 land tracts that were enumerated. These ranged from less than 0.5-650 acres. The ten most frequently recorded farm acreages ranged up to 106 acres. These categories

TABLE 7-2

Data for Heads of Families in the Cooper Lake Vicinity,
Lamar and Red River Counties, 1850

Name	Age	State of Birth	Previous Residence(s)	Resident of Texas ¹	Total Assets
I. Moore	38	Georgia	Tennessee	1841	\$320
G. Settle	32	Tennessee	—	1842	\$200
T. Chafin	40	N. Carolina	Tennessee	1843	—
A. McKorkle	35	N. Carolina	—	—	—
C. St. Clair	65	S. Carolina	—	—	\$160
O. Teul	24	S. Carolina	—	—	—
J. Nidever	20	Arkansas	—	—	\$120
J. Ash	39	Kentucky	—	1841	\$100
J. Nidever	54	Tennessee	Missouri	—	\$1200
N. Nidever	41	Tennessee	—	1841	\$2350
B. Simmons	25	Tennessee	—	1847	\$600
B. Grider	32	Illinois	—	—	\$600
J. Simmons	30	Tennessee	—	1846	\$1000
S. Bean	20	Missouri	—	—	—
J. Webb	32	Alabama	—	1849	\$250
N. Corbet	39	New York	Pennsylvania	—	\$200
S. Nicholson	35	Arkansas	—	1844	\$420
Z. Birdwell	50	Georgia	—	—	\$1500

SOURCE: 1850 United States Census.

¹ Based on birth dates of children in households.

represent 72% of all farm parcels. The most common farm sizes were from 7-16 acres ($n=87$) and 17-26 acres ($n=75$). The next most frequent farm sizes were 37-47 acres ($n=59$), 70-84 acres ($n=53$), 0.85-3.5 acres ($n=52$), and 27-36 acres ($n=50$). The acreage brackets comprising the least-common farms were 48-57 acres ($n=38$), 86-106 acres ($n=36$), 3.7-6.7 acres ($n=27$), and 59-68 acres ($n=22$).

In addition to information regarding farms, details were recorded for the aspects, size, and type of construction of houses, and in some cases sheds and barns. Dates of construction were listed for only 112 houses out of a grand total of 355 dwellings. These dates can be used as a general index of the rate of construction for the period 1839-1935. The most intense period of dwelling construction at Cooper Lake occurred between 1903 and 1912, when five to nine structures were built per year. A moderate construction period (three to four structures per year) was indicated for 1928, 1934, and 1935.

Less-frequent periods of construction (two structures per year) were indicated for the years 1895, 1897, 1901, 1924, 1926, 1930, and 1932. Single dwellings are reported to have been built in the years 1838, 1865, 1885, 1886, 1891, 1893, 1898, 1900, 1904, 1907, 1915, 1922, 1925, 1927, and 1933.

There were no structures reportedly built in the 25-year period from 1839 to 1864. A second period of no construction fell in the 18-year period from 1866 to 1884. From this point onward, construction continued at a steady pace, with only a three-year hiatus from 1887 to 1890, and single years of no construction during 1892, 1896, 1911, and 1931.

The number of rooms was recorded for 144 dwellings. Eighty-eight percent ($n=117$) of these fell between three and six rooms. Four- and five-room dwellings were the most common. Only 10 dwellings had two rooms or less. Sixteen dwellings had seven to nine rooms.

The survey also listed 20 home owners/occupants as persons of color or colored (African American). Of these houses only six were actually enumerated. Two structures (possibly shotguns) had two rooms and were occupied by Jennie Jackson and A. C. Gibbs. One structure had three rooms (W. D. Carter) and another had

four rooms (C. C. Carter). Two structures were fairly substantial, one with six rooms (S. D. English) built in 1915 and the other a 1.5 story dwelling with eight rooms (Ella Weaver). Based on this evidence, the number of rooms within the homes of African Americans did not substantially differ from that of the white residents in this area.

Architecture

Since all buildings were removed from the Cooper Lake area in the 1970s and only ruins remained at the time of these investigations, the WPA surveys comprise the only available data base by which the historic architecture can be understood. The actual length (front) and width (side) dimensions were recorded for 239 houses. These measurements allow the estimation of actual living space as well as the geometry of the structure. This information can be used to crudely separate square from slightly rectangular and rectangular dwellings (equal to or less than 4 ft [1.2 m]) with wide fronts. Rectangular structures with narrow fronts could be divided into two sets, from 5-9 ft (1.5-2.7 m) deeper than wide and over 10 ft (3 m) deeper than wide.

These data generally represent the types of dwellings found on the late nineteenth and twentieth century rural landscape of Cooper Lake. Square structures were invariably hip roof bungalows. Slightly rectangular structures (less than or equal to 4 ft [1.2 m] deeper than wide) were usually hip roof bungalows and some Cumberland (two front doors) or double pen (one front door) dwellings. Rectangular structures with relatively wide fronts in relation to their sides include large Cumberlands, double pens, and central hall or dogtrot structures. Structures that have relatively narrow fronts in relation to their sides include gable bungalows and double pens with small additions 5-9 ft (1.5-2.7 m) deeper than wide. Structures that were more than 10 ft (3 m) deeper than wide include shotguns (usually 16 ft [4.9 m] across or less), gable bungalows, and Cumberland double pens with large ell additions.

The most numerous ($n=69$) of the dwelling categories was the square form. This was also the least diversified with only 11 combinations of length and widths. These ranged from 20-42 ft (6.1-12.8 m) wide and 21-43 ft (6.4-13.1 m)

deep. Two and 4 ft (0.6 and 1.2 m) intervals were common between categories. Dwellings in the second most numerous ($n=58$) dwelling form had 4 ft (1.2 m) or less difference between their front and side dimensions. Those in the third most numerous ($n=45$) category displayed fronts over 4 ft (1.2 m) wider than their sides. This category was the second most diversified ($n=22$) in terms of combinations of dimensions. Dwellings in the fourth most numerous ($n=39$) category had fronts that were over 10 ft (3 m) narrower than their sides. This was also the most diversified ($n=27$) category in terms of combinations of dimensions. The least numerous ($n=28$) dwelling form had narrow fronts measuring 5-9 ft (1.5-2.7 m) deeper than wide. This was the second least diversified ($n=13$) in combinations of dimensions.

Although the exact type of each dwelling could not be identified, general geometry and size can be used to describe the 1925-1936 dwellings. These data indicate great similarity to the Richland Creek vernacular architecture (Jurney 1987). Hip roof bungalows, Cumberlands, and double pens were the most common types and were built with the box and strip technique. This type of housing appears to have been used primarily for tenant farmers, but was also employed in the dwellings of some landowning families.

INFORMANT INTERVIEWS

Objectives and Methods

The principal objective of the research was to characterize the community of Friendship as it was prior to the mid-1930s. In addition, the identification of previous occupants of house sites within the area surveyed under the terms of Delivery Order Number 7 was also requested.

The methods used in this study consisted solely of informant interviews. Extensive archival studies and other informant interviews were previously performed by SMU for the Cooper Lake area under Delivery Order Number 6 (McElhanev 1993) and Delivery Order Number 4 (Saunders 1993). The research perspective employed in this study focuses on an emic approach (Spradley 1980) which, generally, focusses on attempts to record information from the informant's point of view (Malinowski 1922).

Such approaches have benefitted cultural resource management (CRM) studies in Texas (Nunley 1987; Saunders 1993). On the other hand, studies which employ rigid questionnaires, based on sociological approaches, have a tendency to record and present the information from the point of view of the researcher (etic) rather than from the respondents themselves. The important aspect of the ethnological or emic approach used in this study is that the information does not represent "true" historic facts, but instead represents a reflection of the perceptions and lives (Langness and Frank 1981) of the former residents within Cooper Lake. This important humanistic aspect of past lifeways generally has been overlooked in CRM historic studies, which favor archival sources or rigid interview methods over a true anthropological approach.

Very little written documentation exists for the community of Friendship. This lack of data is compounded by the defunct status of the community, as well as by the emigration and death of many of Friendship's former inhabitants. Information pertaining to the community prior to the mid-1930s was obtained through interviews with elderly former residents in which questions were centered primarily on the various domains of life in Friendship (e.g., church, school, farming, work, etc.). This approach was employed in order to avoid, insofar as it is possible, the tendency for individuals to recall their life and times in a random, haphazard manner rather than as an ordered, coherent sequence of events. All informants were allowed to examine and sign a release form provided by the U.S. Corps of Engineers (CE), which protects their rights to privacy, if so requested.

The naming of house sites in this chapter was accomplished very simply. Two of the oldest informants (Mamie Jones Crawford and Jeff Blandon) accompanied SMU personnel on tours of Friendship's roads and were asked to identify where people used to live. Additional studies and field visits on a site-specific basis were conducted with Mr. and Mrs. Boyd Glossup, Mr. Kenneth Cockrum, and Mr. John Banks. These informants covered most of the eastern portion of Cooper Lake. Although few immediately visible remains of houses exist in the Friendship area, Ms. Crawford and Mr. Blandon were able to accurately

name a considerable number of sites (in fact, more sites than the archaeological survey had identified at that time). Subsequently, several of these areas were revisited during the field survey and were recorded as sites. While this method was useful, it was also very time-intensive, and hence, it was not possible to determine the full sequence of site occupations or completely document the entire study area using this method. Therefore, archival research was conducted for all archaeological sites to determine their periods of occupation.

A review of court and land transaction papers conducted under the terms of Delivery Order Number 6 was consulted concurrently with this study. This previous archival study also provided information regarding specific house locations and duration of ownership.

Informants

Friendship Inhabitants

Mamie Jones Crawford (est. 80 years of age)
 Jeff "Runk" Blandon (90 years of age)
 Zethyr Mae Walker (67 years of age)

Klondike Inhabitants

Hack Henderson (73 years of age)
 Richard Jones (age unknown)
 William H. Hunt (age unknown)

Results

The Community of Klondike

The community of Friendship must be understood in the context of its relationship with the town of Klondike. The town's development was pieced together principally from informant interviews, with minimal data obtainable from library research (see McElhaney 1993 for additional archival data). In any event, it is evident that the town's history was part of the broader Texas and southern U.S. history in that the bedrock economy was based on cotton production. The town's rise and fall mirrors the twentieth century events of the U.S. cotton economy.

Klondike was a small town that owed its existence largely to the advent of the railroad,

which came through in 1898. Thus, most of the Cooper Lake area did not have complete and cost-effective market access until the turn of the century, nearly 20 years after other portions of Texas.

Most of the families living in the greater project area prior to the arrival of the railroad were involved in row crop agriculture or cattle raising, and cotton did not become prominent until after that time. With the building of a train depot at Klondike, the town immediately became a regional business center. Tradesmen and salesmen would arrive at Klondike by train and hire horse drawn wagons or buggies to peddle their services and products to other small towns and farmers in the rural hinterland.

From the early 1900s to the mid-1920s the town of Klondike grew, reflecting the strength of the cotton economy in the U.S. at the time. The paved road was constructed through Klondike between 1924 and 1925. Some of the businesses in Klondike during the 1920s include: C. P. Holland Store (general merchandise and automobiles), Truttman and Ward Pharmacy, three groceries, an icehouse, a grocery/soda fountain, a bank, two barber shops, the Blount Hotel, a wagon yard (which rented buggies and horses), a restaurant, a meat market, the Clem lumber yard, a telephone operator, and a small hospital.

The prosperity of the times allowed general store owner C. P. Holland to give away a new 1926 Ford in a raffle. One of the local blacksmiths, Poodle Smallwood, won the car. Other sales gimmicks included tossing apples with coins into crowds of children and releasing turkeys with dollar bills tied to their necks.

During the mid-1930s the town was hit by a series of fires from which it never recovered. This and the fall in cotton prices in the 1930s essentially insured that the town dwindled as other towns (e.g., Cooper, Commerce, and Greenville) grew in importance.

The town of Klondike today exists as a small cluster of homes along the road. Cattle raising appears to be the only local industry, and many residents commute to the above-listed urban areas for work. Most inhabitants work in Commerce or Cooper. A small, brick Post Office is the only nonresidential building in town.

The Community of Friendship

The community of Friendship is located ca. 1 mi (1.6 km) south of Klondike. A schematic map of the community drawn from informant interviews is provided in Figure 7-1. The term "community" adequately expresses the settlement pattern of the small farms which comprise Friendship. In a sense, Friendship was the segregated black satellite settlement of Klondike that never really attained self-sufficiency as a town or village. Friendship was a small farming community with a relatively large number of the

families owning their own land; however, a majority were tenants for white and black landowners. The 1936 WPA surveys clearly indicate that most of the land was occupied by tenants in this area (Figures 7-2 to 7-4, Table 7-3).

According to all informants, both black and white, the relationship between Klondike and Friendship communities was extremely cordial. Neither side admits to any recollection of outright prejudice and harassment in regard to color. Informants state that Flora and Warren Blandon were among the community's first settlers, and indeed are believed to have named it.

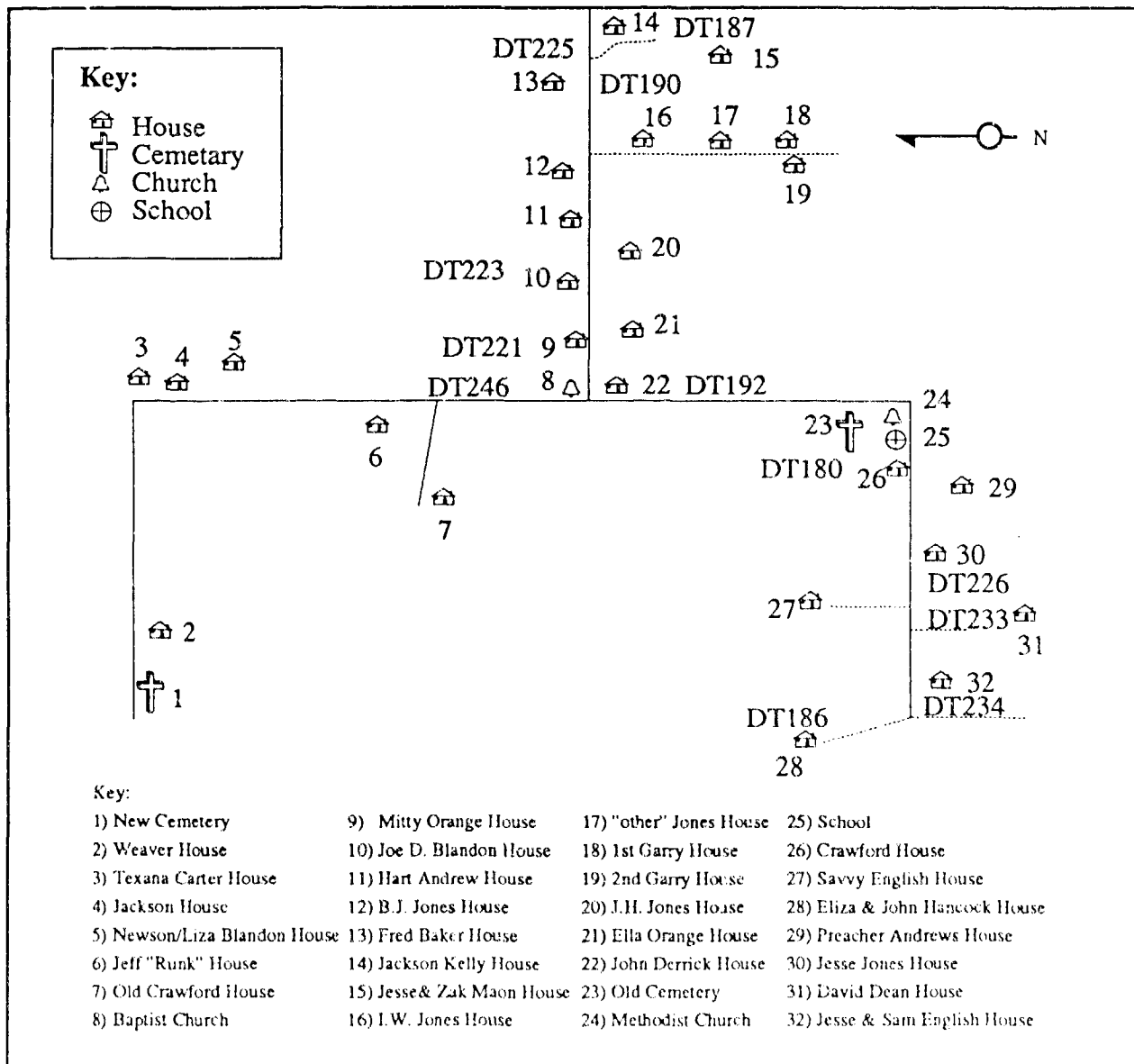


Figure 7-1. Schematic plan of the Friendship community compiled from multiple informant interviews.

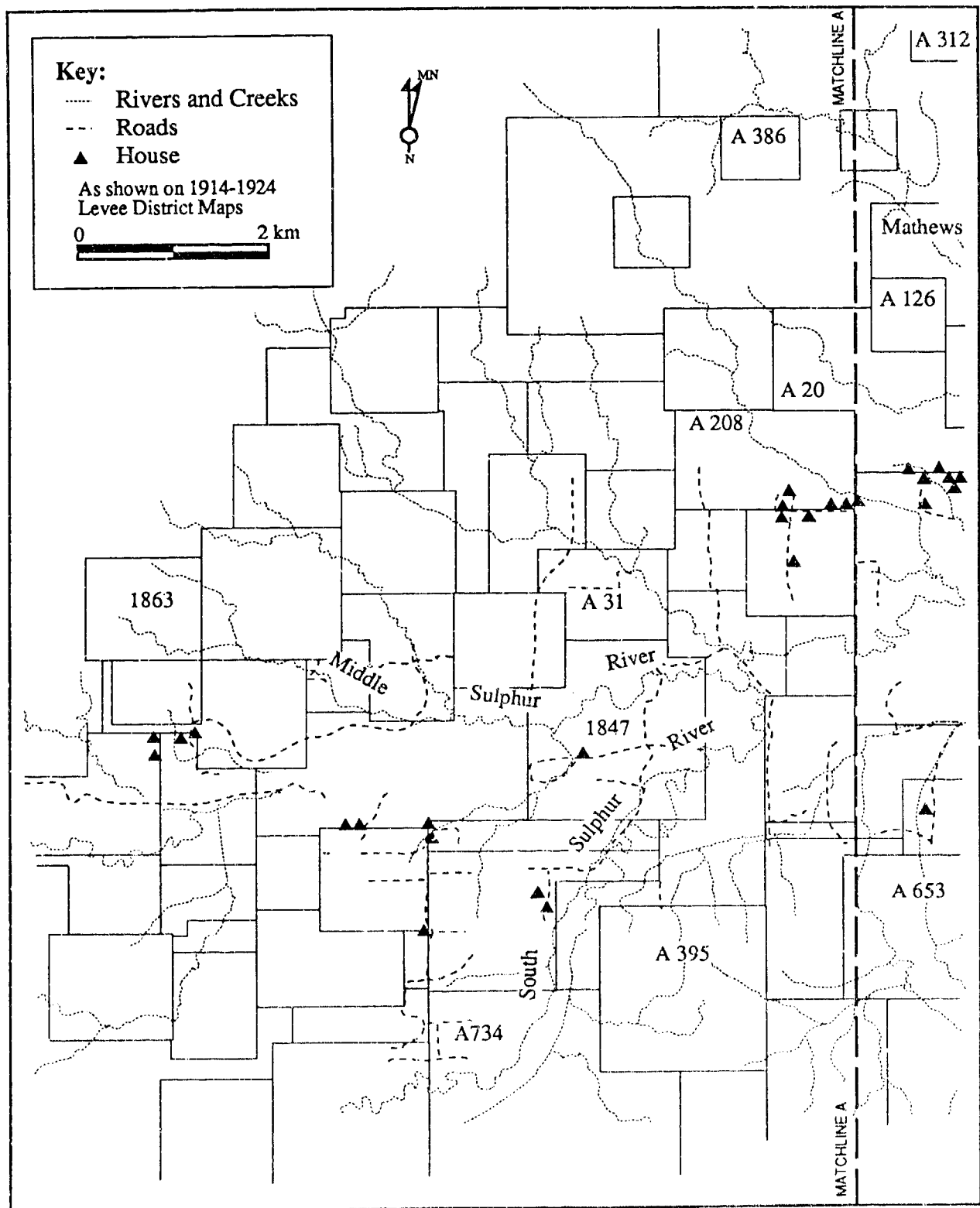


Figure 7-2. Works Progress Administration Map showing dwellings and residence tracts within the Cooper Lake Reservoir project area.

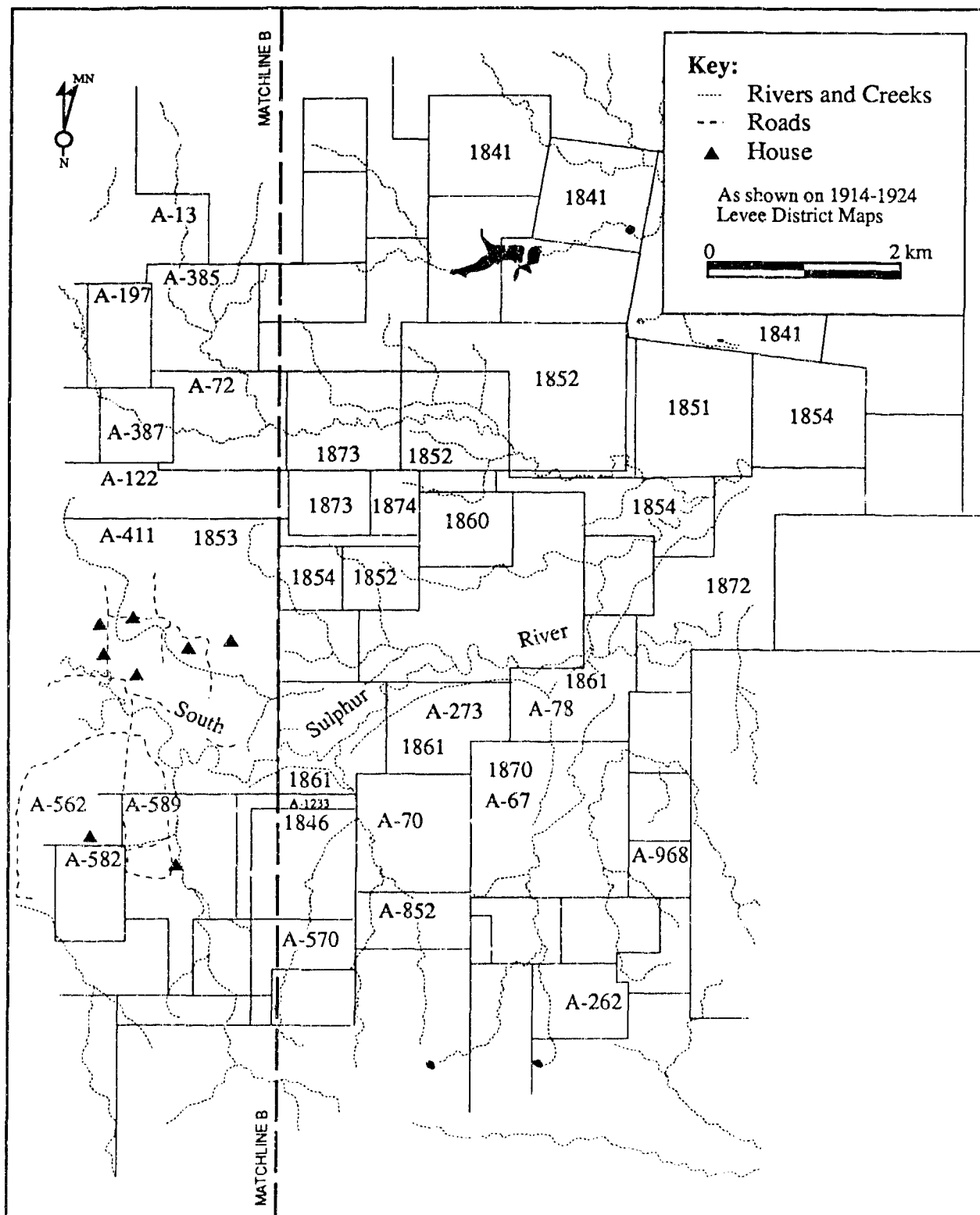


Figure 7-4. Works Progress Administration Map showing dwellings and residence tracts within the Cooper Lake Reservoir project area.

TABLE 7-3

Key for WPA Survey Maps Listing Landowners, Number of Structures,
and Dates of Construction

Tract	Landowner	Structure(s)	Tract	Landowner	Structure(s)
A-13	H. Armstrong	1 Barn 1 Residence	A-194	W.M. Henderson	1 Barn 1 Residence: 1894 1 Shed
A-20	J.B. Bowman	18 Barns 4 Cottages: 1935 50 Residences: 1900, 1904, 1906, 1912, 1916, 1919, 1921	A-197	W.M. Ingram	7 Barns: 1909, 1916, 1917, 1933 7 Residences: 1886, 1910, 1914, 1916 1 Shack: 1905 3 Sheds
A-31	D. Bills	1 Barn 3 Residences 2 Sheds	A-208	W.M. Kimble	7 Barns 1 Bungalow 9 Residences: 1915 6 Sheds
A-33	F.B. Hide	2 Barns 2 Residences 2 Sheds	A-243	W.W. Mathews	1 Barn 2 Residences
A-67	G. Birdwell	5 Barns: 1897, 1905, 1906, 1912, 1932 7 Shacks: 1897, 1898, 1905, 1906, 1908	A-254	N.B. Hall	2 Cottages: 1934 1 Residence 1 Shack
A-70	M. Branom	2 Barns: 1902, 1910 1 Residence: 1910 1 Shack: 1902	A-262	T. Davis	1 Barn: 1917 1 Residence: 1917 1 Shack: 1921
A-72	E.R. Crowder	3 Barns 1 Cottage 2 Residences: 1927 1 Shed	A-265	C.S. Nidever	3 Barns 2 Bungalows 1 Cottage 2 Shacks
A-78	J.J. Barnett	1 Barn: 1903 1 Shack: 1903	A-273	A. Downs	1 Barn: 1918 1 Shack: 1898
A-122	J.J. Barnett	1 Barn: 1903 1 Shack: 1903	A-301	J. Nidever	3 Barns: 1908, 1914 1 Residence: 1908 3 Shacks: 1912, 1914
A-126	E.S. Evans	1 Barn 1 Bungalow 1 Cottage 1 Shack	A-308	E. Spencer	4 Barns 1 Bungalow 2 Cottages: 1935 3 Residences 2 Shacks 1 Shed

TABLE7-3 (cont.)

Tract	Landowner	Structure(s)	Tract	Landowner	Structure(s)
A-312	F. Scarborough	2 Barns 2 Residences 1 Shed	A-574	F. Gassier	1 Barn: 1918 1 Residence: 1916
A-330	H. Sissell	2 Barns 2 Residences 1 Shed	A-582	M.W. Mathews	1 Barn: 1918 2 Shacks: 1907, 1918 1 Shed
A-343	R.D. Spain	1 Barn 1 Residence	A-589	S. McCullough	14 Barns: 1912, 1914, 1915, 1920, 1921, 1922, 1926, 1930, 1932, 1935 2 Cottages: 1918, 1926 16 Residences: 1908, 1909, 1910, 1912, 1914, 1920, 1921, 1925, 1930, 1932, 1935 2 Sheds: 1908, 1926 4 Barns: 1897, 1899, 1905, 1909 2 Residences: 1897, 1923 4 Shacks: 1893, 1899, 1903, 1905
A-355	J. Turner	2 Barns 2 Residences: 1907 3 Shacks 2 Sheds	A-653	G. Merrick	7 Barns: 1891, 1903, 1905, 1915, 1916, 1920, 1925 1 Cottage 5 Residences 2 Shacks
A-374	F. Gassier	1 Barn: 1918 1 Residence: 1916	A-734	S. Perkins	2 Barns: 1918, 1924 2 Residences: 1918, 1924
A-386	B. Williams	1 Cottage	A-968	T. Trent	1 Barn: 1900 1 Shack: 1900
A-395	T.B. Hill	5 Barns: 1901, 1906, 1912, 1928 3 Residences: 1895, 1908, 1916 4 Shacks: 1901, 1908, 1910, 1928 1 Shed: 1908	A-1030	H.L. Ward	2 Barns: 1909, 1924 2 Residences: 1909, 1924 4 Shacks: 1910, 1919
A-397	B. Williams	3 Barns 3 Residences 3 Sheds			
A-411	J. Zunega	10 Barns 7 Bungalows 1 Cottage 5 Residences			
A-445	Lofton Vess	3 Barns 4 Shacks: 1926 3 Sheds			
A-562	J. Lindley	1 Barn: 1914 1 Residence: 1912			
A-570	B. Lucindger	1 Barn: 1930 1 Residence: 1929			

TABLE 7-3 (cont.)

Tract	Landowner	Structure(s)	Tract	Landowner	Structure(s)
A-1151	N. Webb	8 Barns: 1903,	A-1223	J. Campbell	2 Barns: 1909, 1921
A-1159		1905, 1906, 1913,			4 Shacks: 1908,
A-1160		1914, 1916			1921, 1924
		5 Residences: 1895,			
		1915, 1916, 1918			
		7 Shacks: 1900,			
		1901, 1903, 1905,			
		1909			
		1 Shed: 1920			

Flora Blandon is said to have been a Native American (Choctaw) who came to the community with a little gold and a horse. Her husband was African American. The exact date of the settlement of Friendship is not recorded, but the author estimates it to be after the Civil War.

Warren Blandon donated the land for the old cemetery, school, and Methodist church (see Figure 7-3, Nos. 23 and 24). The old cemetery became widely known for its free burial service. As Zethyr Mae Walker says, "We done great for poor folks." This cemetery has since been relocated outside of the reservoir area, and no documentation of the mortuary architecture or demographic information was funded under Delivery Order Number 7.

The first settler families, the Blandons, Jones, Crawfords, Kellys, and Carters are believed to have moved from Mississippi after slavery ended. Henry and Lucretie Jones (see Table 7-3 and Figure 7-3) arrived in Friendship with their two daughters, Phoebe and Nettie. According to Zethyr Walker, "the old boss was kind enough to put enough stuff in the wagon to feed those two kids during the trip."

Education

The school (see Figure 7-3, No. 25) was a two-room structure which was in existence at

least as early as 1900. This structure was removed prior to the present study and no archaeological evidence of its location was identified, despite close reconnaissance and excellent ground exposure. Teachers at the school were generally from the community. One room held grades one to six, while the other room housed grades seven to nine.

Roxy "Arizona" English, the daughter of W. R. Blandon, taught grades one to six. Ms. McKinney, who taught the higher grades, is fondly remembered as being an excellent teacher. According to informants both rooms of the school were full. Zethyr Mae Walker was the last teacher in 1943. She taught only four students that year.

The educational structure of the community is impressive because by the mid-1900s, as one informant indicated, every family had at least one child who went to college. As she said, "We learned to work, not steal" and at night, "had to read, write, spell, and quilt." The Blandon family is interesting from this perspective. The children of N. B. Blandon and Cora Jones are testimony to the success of some of the people of Friendship. While the two sons, Jeff and Rufus, only had a little schooling, the daughters Flora, Alla, and Albertine went to college. Flora and Alla became teachers, while Albertine sold real estate.

Local Economy and Personal Occupations

The majority of households in Friendship during the early 1900s can be described as farming households. The major crops were cotton, corn, sorghum, and maize. The farming household depended on family labor for the raising of crops and only after the household farming was finished did men hire themselves out as laborers to other (usually white) farmers.

Both males and females worked in the fields when intensive labor was needed for harvesting or planting. Children learned farm work at an early age. Jeff Blandon recalled that when young he worked for his uncle and did not frequently go to school. He learned to "drag cotton, run mules and make corn." Zethyr Mae Walker learned to chop cotton at 11 years of age, but she says she could never keep up with John Henry Jones who "was a slavery-time man. He swept the row like a streak and turned right around." The farming household contained at minimum: living quarters, a storehouse, a barn, and a cistern or well.

Essentially all historic sites older than 50 years in Cooper Lake had a hand-dug, unlined well, which today is recognized by a depression. Brick-lined wells and cisterns were located on approximately 30% of all farmsteads. The storehouse often had a barrel of corn, jellies, jams, canned goods, and unshelled pecans. Also in the storehouse was a big block for salting pork. The cotton gin and mills were located in Klondike, Cooper, and Commerce. Thus, crops were sold or milled away from the settlement. According to Jeff Blandon, corn was milled for a "toll" or portion of the product.

Agricultural labor was another common occupation in Friendship. Some Klondike whites owned or rented property in the Friendship community, which they farmed with the help of black laborers. The woods along the creek in Friendship were used as a source of lumber for the Clem Lumber Yard in Klondike. The men would water their horse teams hauling wood from Joe Blandon's trough (see Figure 7-3, No. 10).

Other forms of income and subsistence included animal husbandry, syrup making,

hauling wood, etc. Animals that were raised included pigs, ducks, chickens, cattle, and turkeys. In general, animals were raised for market. Turkeys appear to have been a relatively popular form of market production. Some people also tended a few horses. According to informants, when an animal was killed the meat was shared among neighbors.

While most of the men worked as farmers and agricultural laborers, a few did other types of work. N. B. Blandon worked as a barber in Klondike. Charlie Jones worked at the Klondike cotton gin and later worked for the WPA. John Derrick ran a sorghum mill at his house (see Figure 7-3, No. 22), as did the Hancock family (see Figure 7-3, No. 28). J. H. Jones (see Figure 7-3, No. 20) had a small store attached to his house where he sold candy, snuff, and tobacco, among other items. Rosie Derrick, John's wife, is reported to have run a small restaurant out of her home.

Besides their domestic duties and field labor on the farm, some of the women also worked in the homes of Klondike whites. For example, Cora Blandon washed clothes and cleaned house.

Churches

The community of Friendship was large enough to support two churches, one Methodist and one Baptist (see Figure 7-3, Nos. 24 and 8, respectively). The Methodist church was built near the school and cemetery. The Baptist church was across the road from the Baker house (see Figure 7-3, No. 13) and in 1949 was moved onto the Blandon property across the road from the Derrick house. This structure was subsequently destroyed or removed and is not present today.

The two churches worked cooperatively in Friendship. Services were held at the Baptist church on the first and third Sundays of every month, and at the Methodist church on the second and fourth Sundays. Church functions included organ playing, meetings, choir recitals, quartet singing, and occasional visits from missionaries and itinerant preachers. The churches were also the focal points for summer gatherings and picnics with baseball games.

Kinship

The kinship diagram for Jeff Blandon is presented in Figure 7-5. What is most apparent is the great amount of intermarriage within the community in the second descending generation. Thus, among the seven daughters listed in this generation (Roxy, Julie, Cora, Phoebe, Bell Anthony, Nettie, and Emma), six married men from the community of Friendship itself. Of the five sons listed in this generation (W. R., Joe, N. B., I. W., and J. H.), four married Friendship girls.

In the third descending generation, however, marriages were made outside of the community, with only one of six children (Lettie) marrying a Friendship native. This change in marriage pattern may be due to at least two factors.

First, the preceding generation had involved the marriage of many of the founding families and further marriage within the community would have required marriage to cousins or similarly close kin. Also, this marriage pattern served to keep land within the family, since it was essential to survival in a rural agrarian economy.

Second, by the third generation in this case, daughters Alla, Flora, Lettie, and Albertine were being educated and found new livelihoods. They left home after the seventh through ninth grades, and went to high school in Greenville. Later they went to college.

SUMMARY

Friendship has ceased to exist as a community. Only three or four house sites are still standing (though barely, and in ruin), and the cemetery has been removed along with much of the original mortuary architecture. Jeff

Blandon, 90 years old and in good health, lives on the edge of the project area in a three-room, wooden frame house that has no indoor plumbing. An outhouse stands on the back of his lot. Rain water runoff from the roof is collected in a large metal cistern at the back corner of the house. An old wood-burning heater stands in the center of the room he uses for a bedroom.

To Jeff (or "Runk"), the barren remains of what was once a thriving community with two churches and a school are still alive. He remembers how he and the Crawford and English boys had a camp under a big oak tree. They had a stove there, could sit under the tree and not get wet in the rain. They could also cook and hunt down there and swim in the creek. Dragging cotton and chopping cotton were common tasks. Running rabbits was for fun. He provided a direct link to the 1936 survey by remembering when he stopped farming: "If you had too many rows of cotton you had to sign a piece of paper." Ironically, though the WFA attempted to encourage farm improvement, it may in fact have driven many traditional agriculturalists away from farming.

Although the community of Friendship is remembered by only a few of the region's elderly residents, the community is reported to have been alive until as recently as World War II. After that, indicated one informant, "so many people died and people just moved away."

Thus, the abandonment of farmsteads in the Friendship community can be explained by a combination of factors. The passing of generations and, with them, the community's traditional agriculturalists may be the most important factors. The decline of the cotton economy, new access to education, and alternative lifestyles for new generations also assured that the family farm would not continue.

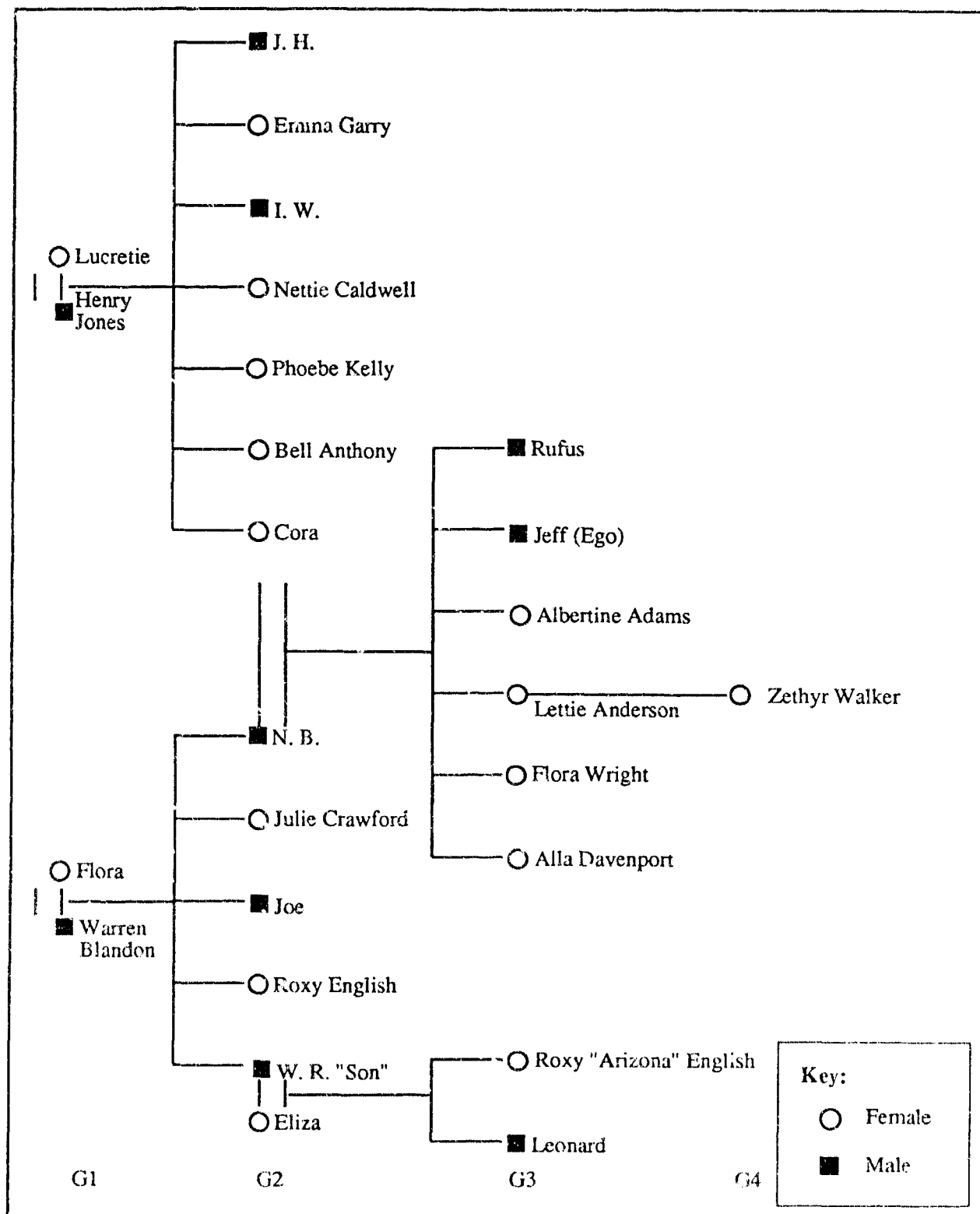


Figure 7-5. Kinship chart for informant Jeff Blandon, based on his own recollections.

Results

8

Site discussions for previously recorded and newly recorded sites within the Delivery Order Number 7 survey area are presented below. Environmental parameters, including native vegetation, soil type, and topographic setting; status and nature of cultural deposits; artifacts recovered; features noted; and preliminary evaluations and assessments of National Register eligibility are provided for each site. Sites were assessed following the general procedures outlined in Chapter 5, this report.

Four categories of evaluation were requested by the Fort Worth District U.S. Army Corps of Engineers (CE) to specify the potential National Register eligibility of each archaeological site. Category I sites are definitely eligible. Category II sites need further work for proper evaluation. Category III localities are definitely not eligible. Category IV localities are not significant and require no further consideration. If Category IV localities present adverse circumstances, such as open wells, cisterns, or debris that presents health or safety hazards, recommendations are made for their removal.

The following site descriptions are organized according to a standard format. First, the date of initial recordation, environmental setting, and soil associations are presented. The natural and cultural stratigraphy identified in subsurface probes, backhoe trenches, or exposed soil profiles is

presented for each site. Archival and informant information is presented for historic sites. The results of previous studies, if applicable, are then summarized. In some cases, previously recorded sites (e.g., 41HP110, 41HP111, and 41HP119) have been deemed clearly not eligible for the National Register of Historic Places (NRHP), in concurrence with the Texas State Historic Preservation Office (SHPO). The fieldwork conducted under the terms of Delivery Order Number 7 at each site is explicitly discussed, and the results of the current investigations are summarized. Finally, each site is assessed in terms of its potential to fill data gaps in the settlement patterning, paleoenvironmental reconstruction, technology and subsistence, and material culture research topics outlined in draft and final versions of the Cooper Lake Research Design (Moir and Journey 1988). The site's preliminary National Register category is listed, along with recommendations for further work or evaluation.

HOPKINS COUNTY SITES

Site 41HP16

This prehistoric site (Figure 8-1) was originally recorded as 41-19C5-17 in the 1950s (Moorman and Jelks 1952). It is located at the base of a west-facing ridge, 350 m (1,148 ft)

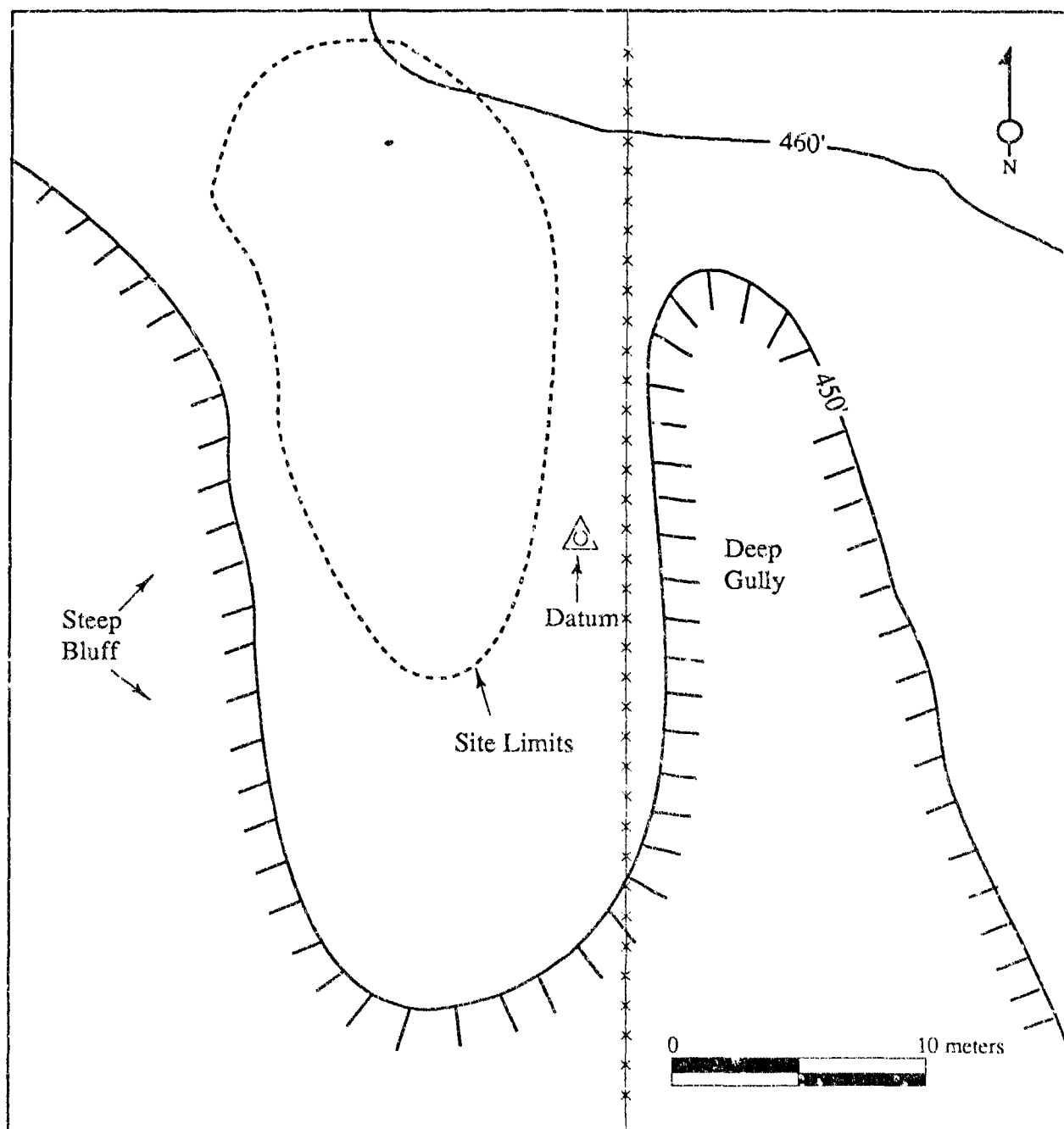


Figure 8-1. Plan of site 41HP16, showing site limits (as defined by surface artifacts) and datum.

east of the South Sulphur River and 2 km (1.2 mi) north of State Highway 71. Elevation of the site varies between 140 m (460 ft) and 143 m (470 ft) above msl, and the mapped soil type is Ellis clay. In its native state, this site was located in an upland forest dominated by oaks. The site was denuded sometime during the twentieth century and is currently in second-growth forest. Due to

its topographic position, the site is within a non-aggrading environmental setting.

Stratigraphy

A single stratum was identified at site 41HP16. This is a yellow clay which is the weathered marl of the Kincaid Formation (Ferring

1993: E3-5). The stratum is culturally sterile. The mapped soil type in the area is the eroded Ellis clay, which normally has four strata, an A-horizon (0-15 cm), a B2 (15-50.8 cm), a B3 (50.8-78 cm) and a C, which is shale and clay, or marl. This soil has 5-12% slopes in this area.

Archaeological Investigations

When visited in 1951, site 41-19C5-17 was characterized as a small, non-pottery site comprised of a small scatter of chipping debris. The site was described within a group of others and was thought to date to the Late Archaic period (Moorman and Jelks 1952:3). No further work was recommended for the site.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. There was no A-horizon present, and the datum was placed in the underlying marl.

The prehistoric items recovered from the surface of the site included fire-cracked rock, one flake, and a bifacially tested cobble. Historic period items collected from the ground surface at the site include three ceramic sherds (one ironstone, one porcelain, and two stoneware), five bottle glass sherds (three manganese solarized and two aqua), and 20 thermally altered *Bos taurus* bones/bone fragments. The ironstone and porcelain fragments are non-diagnostic. The stoneware fragments are light brown glazed, dating ca. 1890-1930. The manganese solarized bottle glass sherds date ca. 1880-1920. One of the aqua bottle glass fragments, a hand-finished neck with lip, dates ca. 1810-1880. This locality is classified as an unknown prehistoric and historic site of unknown function.

Recommendations

Because the site's deposits represent a mixture of prehistoric and historic materials on a severely eroded landform, it is deemed to be clearly not eligible (Category III) for nomination to the NRHP. It has low potential to address the five prehistoric research questions and the seven historic research topics (environmental studies and

settlement, historic adaptation and change, intrasite patterning and sheet refuse studies, technology and chronology, socioeconomic and ethnic status, rural industry, architecture, and cemetery demography) outlined in the Research Design. Also, the landform containing this site essentially has been denuded by post-settlement erosion. If future information is found that warrants additional consideration, this site will be reevaluated for NRHP eligibility. No further work is recommended at this time.

Site 41HP17

Prehistoric site 41HP17 was originally recorded as 41-19C5-18 by Edward H. Moorman in 1951. At that time, the site consisted of a small rise (ca. 0.4 ha; 1 acre) in the South Sulphur River bottom, ca. 91 m (300 ft) from the cutbank of the river. The site, as shown on the USGS maps, was elevated ca. 134 m (440 ft) above msl, and situated adjacent to a channelized segment of the South Sulphur River. Once a riparian forest, this area has been lumbered. The area was in pasture at the time of the 1989 investigations, but soil erosion in some of portions of the site exposed flakes and fire-cracked rock.

Stratigraphy

Three natural strata were identified from backhoe excavations in this general area (see Chapter 6, this report). Stratum I, the lowest (oldest), is a yellowish brown (10YR5/4) silt with an abrupt upper boundary ca. 1 m below ground surface.

Stratum II is a very dark gray (10YR3/3) clay which is exposed in some areas, such as the rise reported by Moorman and Jelks (1952). This stratum, which was the prehistoric land surface, is characterized by low rises or mounds that were frequently occupied by prehistoric groups. These phenomena were noted in the South Sulphur River Valley by Stephenson (1950:5), who referred to them as "capped ridges," and by Moorman and Jelks (1952:4), who described them as "mounds" or "capped ridge mounds" with associated middens.

Stratum III is discontinuous in this portion of the South Sulphur River Valley. It is a mottled

clay that is very dark gray (10YR3/1) in color. This stratum may represent post-historic settlement, overbank deposition.

Archaeological Investigations

In 1951, two contracting stem dart points (Gary) were recovered from the site. Although these two artifacts are curated in the TARL collections, an additional 13 specimens also apparently collected at that time were not included in the TARL collections when they were inventoried by David Dibble in 1986.

Fieldwork conducted under the terms of Delivery Order Number 7 consisted of pedestrian survey at 20 m intervals. Second-growth forest covers the old pasture today and additional erosion in the reported site area has provided ground exposure ranging from 30-50%. Following the terms of Contract DACW63-87-D-0017, one person day was expended in an attempt to relocate this site. No cultural materials were noted.

Recommendations

Moorman and Jelks (1952) did not recommend any further investigations at site 41HP17. It is very unlikely that potentially significant cultural resources are preserved at this locality, given the absence of cultural materials noted during the present survey and the continuous erosion of the landform for at least 40 years. Since the site was not relocated, it is classified as Category II, of unknown NRHP eligibility.

Site 41HP18

This previously recorded prehistoric site (Figure 8-2), originally designated X41AP19, is located along the crest of a west-facing slope, 50 m (164 ft) east of the South Sulphur River and 2.825 km (1.75 mi) north of State Highway 71. Site elevation is 143 m (470 ft) above msl, and the mapped soil is Bazette clay loam. In its native state this was an upland forest dominated by post oaks.

Stratigraphy

A single stratum was identified at site 41HP18. This is the weathered marl of the Kincaid Formation, which forms the Bazette and Ellis clay loams. This landform has been deforested in historic times and erosion has stripped away the shallow upper soil horizons and cultural strata. Normally both soils have A-horizons, but the soil in this area has eroded into the lower B soil horizon.

Archaeological Investigations

This site was originally recorded as 41-19CS-19 (Moorman and Jelks 1952). In 1951, this locality was described as a non-pottery site and interpreted as a Late Archaic occupation. The distribution of cultural materials was relatively limited, and no further work was recommended at that time.

The site was revisited by SMU in 1970. At that time, flakes, cores, dart point preforms, and fire-cracked rock were collected along a 20 m x 5 m area near the river bank. The artifact assemblage recovered from site 41HP18 consisted of 157 items, primarily including Ogallala quartzite flakes (68.7%) and fire-cracked rock (19%). Dart point preforms (n=3) and retouched pieces (n=11) were the next most common artifact categories (combining for 8.9% of the total), followed closely by cores and bifaces (3%). Erosion of the site and impacts by a recently (ca. 1970) built house were also noted at the site.

During testing operations in 1976, a total of seven 1 m x 1 m test units were excavated at this locality, which was then referred to as the Carp site (Doehner, Peter, and Skinner 1978:159-165). Excavations were conducted in 5 cm arbitrary levels, and all recovered cultural materials derived from the upper 10 cm of the site deposits. On the ground surface, a 150 m² scatter of glazed brick and wooden beams was present, and three 1 m x 4 m test trenches were excavated on an east-west axis through these apparent historic structural remains (Doehner, Peter, and Skinner 1978:160).

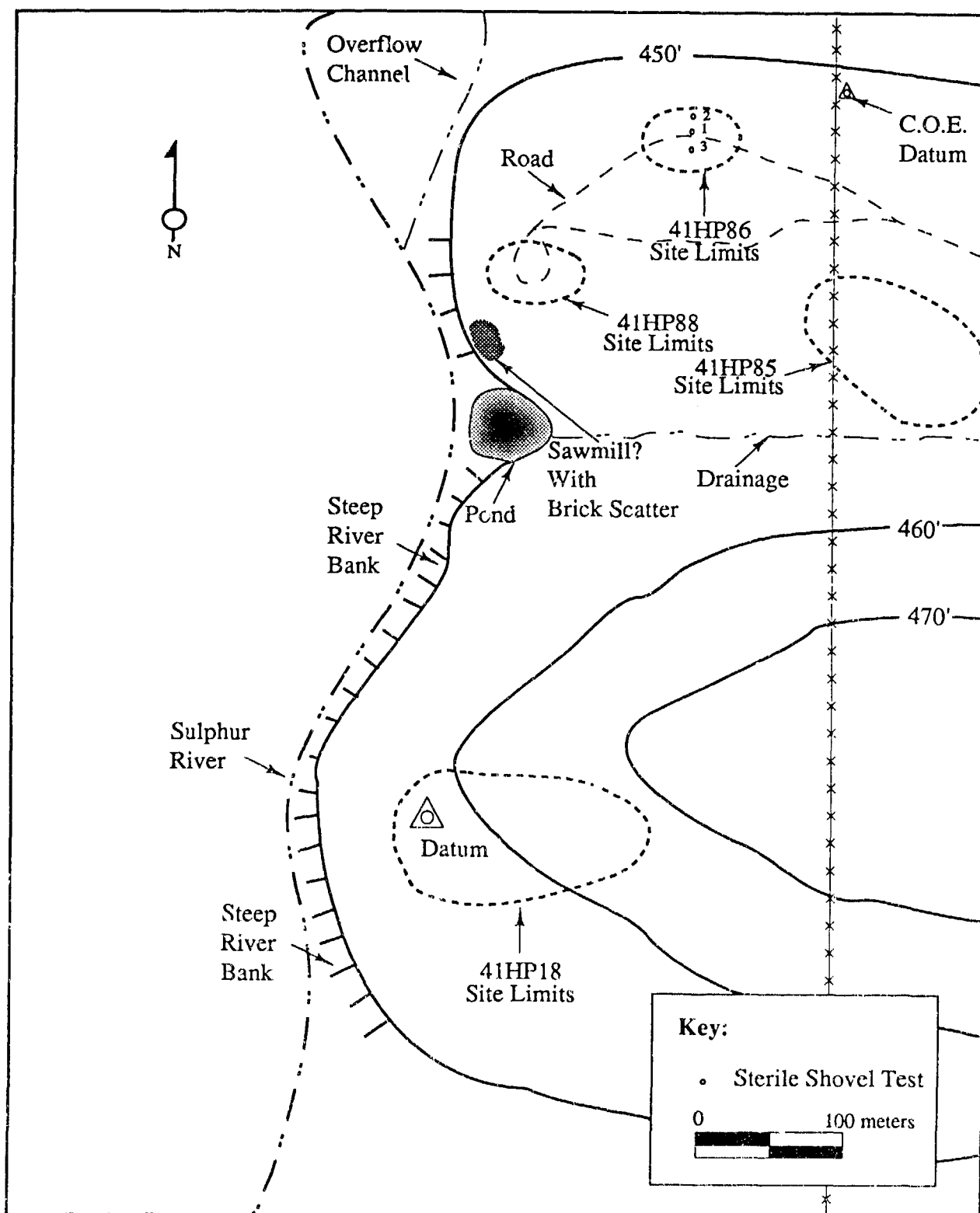


Figure 8-2. Plan of sites 41HP18, 41HP85, 41HP86, and 41HP88, showing locations of shovel test units and site limits (as defined by surface artifacts).

The historic component was ultimately interpreted to represent an industrial structure dating ca. 1890-1930s. Although the total historic artifact yield from the site is not provided, the assemblage included a chain, pipe fragments, a lead ingot, iron blades, a ball peen hammer, files, bolts, a fan belt fragment, an engine valve, and fragments of clear glass (Doehner, Peter, and Skinner 1978:24).

The site's prehistoric component from the seven test units excavated in 1976 consisted of 882 artifacts. Lithic form tools identified in the assemblage included one untyped dart point, 12 bifaces, one scraper, one graver, and 19 retouched flakes. Additionally, 10 cores, 606 debitage flakes, and 230 fire-cracked rock fragments were also recovered. The prehistoric assemblage from the 1976 testing also included two ceramic sherds, one bone-shell-and-grog-tempered and one grog-tempered (Doehner, Peter, and Skinner 1978:162-164).

The site was revisited during the 1989 survey. A close interval pedestrian reconnaissance was performed, and a single excavation unit (35 cm x 35 cm x 35 cm) was excavated for emplacement of a permanent datum. Since there was no A soil horizon in this culturally sterile unit, the datum was set in the underlying clay. Two whole flakes, four utilized flakes, one endscraper, and one early aborted biface were collected from the surface of the site. The site appears to represent a Late Archaic lithic reduction area and camp site. Erosion of the site has been documented from 1951 to 1989, and impacts from house construction have also affected site integrity.

Recommendations

Due to disturbances at the site, 41HP18 is thought to be clearly not eligible (Category III) for the NRHP. Although the site could have potential to yield information on lithic reduction strategies, the lack of temporal diagnostics or material for radiometric dating prevents secure cultural placement. (It should be noted, however, that the presence of dart point preforms suggests general Archaic period associations). Furthermore, extensive erosion has greatly reduced the integrity of the site. If future information is found that warrants additional consideration, this site will be

reevaluated for NRHP eligibility. No further work is recommended at this time.

Site 41HP19

This prehistoric site was originally recorded as 41-19C5-20 by Edward H. Moorman in 1951. At that time, the site consisted of a small rise (ca. 0.4 ha; 1 acre) on the floodplain of the South Sulphur River. The site was elevated between 131 m (430 ft) and 134 m (440 ft) above msl. The original vegetation consisted of a mixed hardwood forest.

Stratigraphy

Backhoe trenches were excavated along this general stretch of the South Sulphur River, 1 km (0.6 mi) upstream from site 41HP19 (see Chapter 6, this report). Backhoe Trench 71 provides a deep, representative profile of the two strata in the floodplain containing site 41HP19. These strata are discussed in order from older (lower) to younger (upper).

Stratum I is a black (7.5YR2/0) clay with a diffuse upper boundary at 1.2 m below ground surface. It was excavated to a maximum depth of 1.8 m below surface. Stratum I is culturally sterile.

Stratum II is a dark gray (10YR4/1) silt loam with light gray (10YR7/1) striations. These striations appear to be silt films that have formed along the faces of cracks. Stratum II is culturally sterile.

Archaeological Investigations

Cultural materials collected in 1951 include a Gary dart point and plain, shell- or bone-tempered pottery (with one specimen displaying punctates). When David Dibble inventoried the complete collection in 1986, a small scraper was also noted. Other cultural materials noted, but apparently not collected in 1951, included burned bone and mussel shell.

Fieldwork conducted under the terms of Delivery Order Number 7 consisted of pedestrian survey at 20 m intervals. The landscape in this area has been buried under recent sediments, obscuring surficial evidence of this site. Dense

second-growth forest in this area and to the east prevented any access by backhoe to perform deep excavations. One person day was expended in an attempt to relocate this site.

Recommendations

Moorman and Jelks (1952) interpreted site 41HP19 as a seasonally occupied camp with shallow, low-density deposits. No further work was recommended at that time. The published description of 41HP19 indicates that it may represent one of many "capped ridge mounds" with associated middens in the area, a postulation that is potentially confirmed by the site's location and topographic setting, as well as by the presence of ceramics, burned bone, and mussel snail. However, the site could not be relocated during the course of the present investigations, and, based upon the 1951 collection, it appears to have contained mixed components. Moreover, since the majority of sites investigated to date in the

Cooper Lake study area resemble 41HP19, further data recovery would, in all likelihood, provide redundant information. However, since the site was not relocated, it is classified as Category II, of unknown NRHP eligibility.

Site 41HP20

This prehistoric site (Figure 8-3) was recorded as 41-19C5-21 in 1951. The site is located west of the Peerless Road on a gravel road leading west to Merrit Creek. This upland site is located at 142 m (465 ft) above msl, on an Ellis clay soil, 5-12% slopes. In its native state, this area was an upland post oak forest adjacent to a mixed hardwood slope forest.

Stratigraphy

The soil at 41HP20 is derived from weathered marl. Backhoe Trench 60, excavated on the same landform at the same elevation as site

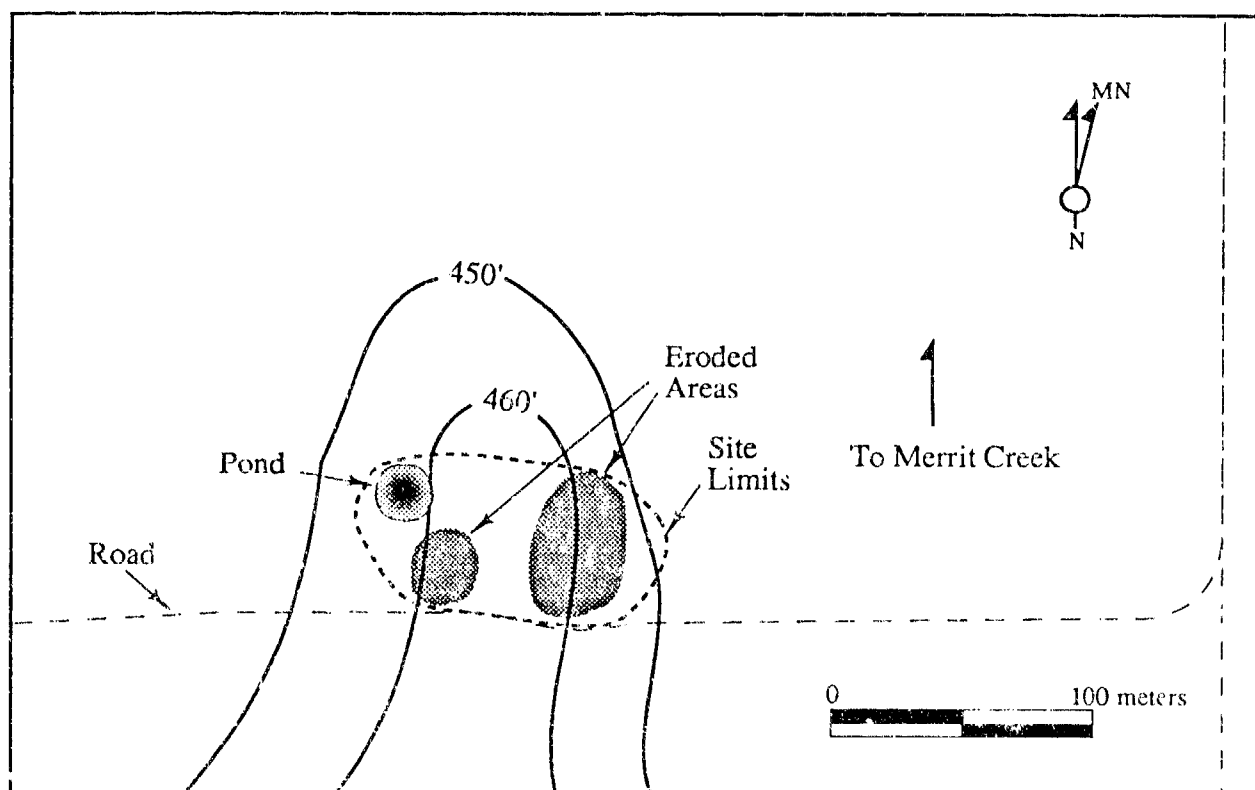


Figure 8-3. Plan of site 41HP20, showing location of site limits, land disturbances, and eroded areas (shaded), based on 1970 information.

41HP20, represents a typical profile of the Ellis clay soil. Four natural strata, all composed of various stages of weathered marl, were identified. These strata are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a gray (10YR6/1) clay with light olive brown (2.5YR5/6) and reddish yellow (7.5YR6/8) mottles. It has a diffuse upper boundary at 1.1 m below ground surface.

Stratum II is a gray (10YR6/1) clay with reddish yellow (7.5YR6/8) mottles. Its upper boundary occurs at 80 cm below ground surface.

Stratum III is a brown (10YR5/3) clay loam with calcium carbonate concretions. Its upper boundary occurs at 50 cm below ground surface.

Stratum IV, the surface stratum, is a brown (10YR5/3) clay.

Archaeological Investigations

When visited in 1951, site 41HP20 was described as a small, aceramic site with shallow, low-density deposits. No further work was recommended at that time (Moorman and Jelks 1952:4).

This site was revisited by SMU in 1970. At that time three dart point preforms, five Gary dart points, two retouched pieces, and fire-cracked rock were collected from two eroded areas (see Figure 8-3). This site was considered to be a Late Archaic temporary camp, and no further work was recommended.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. No artifacts were observed on this eroded landform, and no permanent site datum was emplaced.

Recommendations

Although no artifacts were recovered in 1989, this site was thoroughly documented in 1970. Indeed, three separate archaeological investigations have confirmed that 41HP20 is a low-density site located in a heavily eroded landform. The site is deemed clearly not eligible (Category III) for nomination to the NRHP because it fails to meet the criteria of significance and has low potential to address the five prehistoric research questions

outlined in the Research Design. The relative abundance of Gary dart points reported at this site in 1970 suggests that it may be the locus of some specialized function, such as tool kit refurbishing, or a temporary encampment. The lack of stratigraphic integrity, erosion, and construction of a stock watering pond have greatly altered this site's archaeological potential. If future information is found that warrants additional consideration, this site will be reevaluated for NRHP eligibility. No further work is recommended at this time.

Site 41HP74 (Society Site)

This prehistoric site (Figure 8-4) was originally recorded as X41HP2 by SMU in 1970. It is located on a knoll 860 m (2,821 ft) south of Merrit Creek, in a level pasture which was cultivated in the 1970s. Elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Kaufman clay. The site area was originally defined as covering 6,000 m² (64,584 ft²). In its native state, this site was in mixed hardwood floodplain forest.

Stratigraphy

Three natural soil strata are present in the mapped Kaufman clay, and all three were identified in backhoe excavations near site 41HP74. These strata are described below from oldest (lowest) to youngest (uppermost).

Stratum I is a black (10YR2/1) clay with a diffuse upper boundary at 1.6 m below ground surface. Calcium carbonate concretions were noted in this stratum.

Stratum II is a black (10YR2/1) clay with an upper boundary at 25 cm below ground surface.

Stratum III, the surface horizon, is a black (10YR2/1) clay.

Archaeological Investigations

In 1970, the site was gridded into 72 10-m² units and then systematically surface collected. Two 2-m² units were excavated in 10 cm levels to sterile subsoil. Cultural materials were recovered from the top 30 cm of the site. The total artifact assemblage consisted of 264 items, with flakes

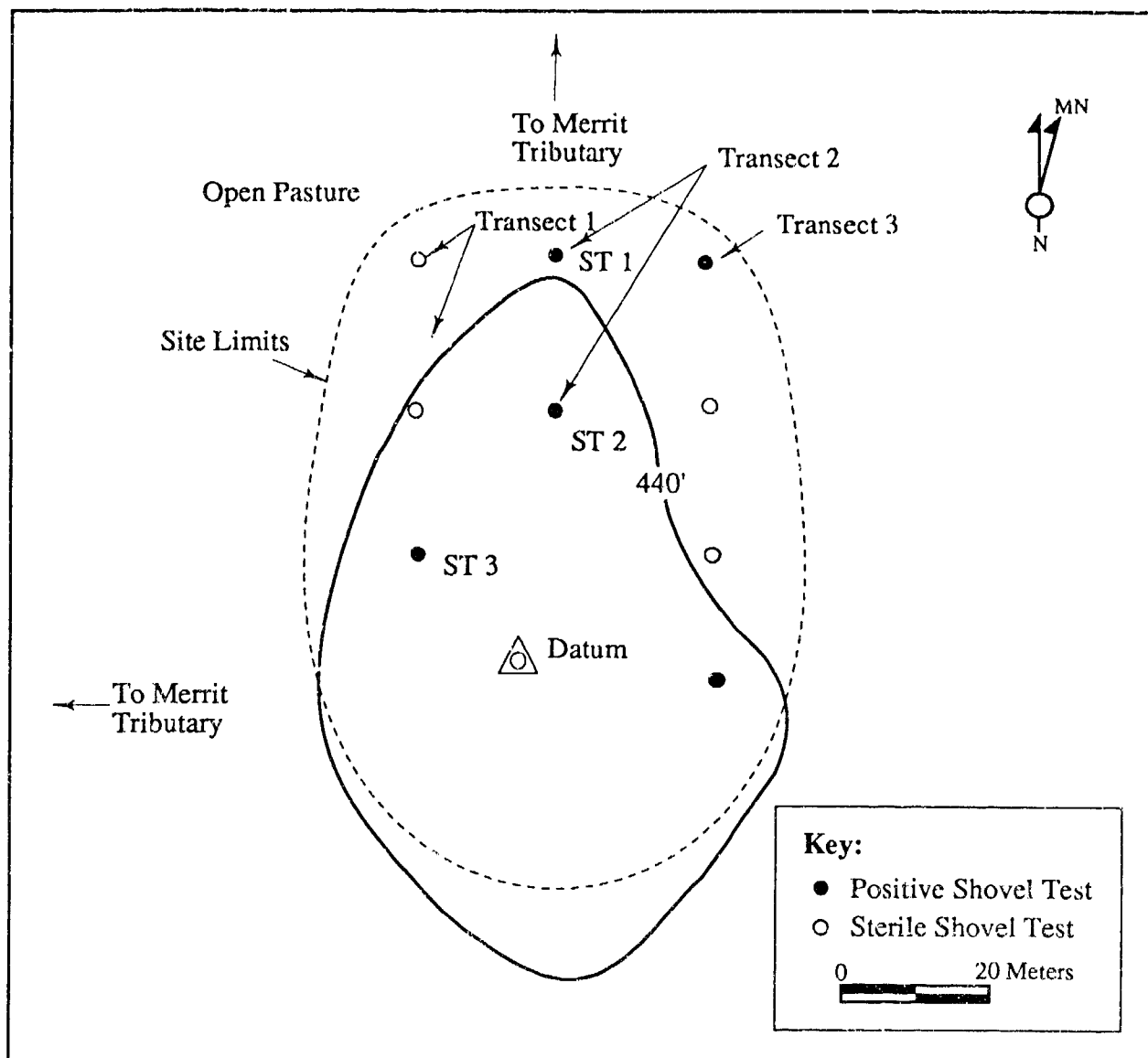


Figure 8-4. Plan of site 41HP74, showing locations of shovel tests and site limits (as defined by surface artifacts and positive shovel tests).

comprising 38%, fire-cracked rock 22%, pottery 21%, cores 9.5%, and lithic tools 7.6% of the assemblage (Hyatt and Skinner 1971:14). The projectile points were all fragments, and included three darts (one of white chert and two of quartzite) and two quartzite arrows (one contracting stem and one preform). All flakes were Ogallala quartzite. The ceramics were all classified as sand tempered, with two sand/bone-tempered and three "sherd-tempered" fragments.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval

(5 m) pedestrian survey and shovel testing. In addition, a permanent datum was placed on the site (see Figure 8-4). Three shovel test transects with units spaced at 20 m intervals were excavated. A total of nine units were excavated, four of which were sterile. These test units measured 30 cm x 30 cm and ranged in depth from 20-30 cm. All soil was screened through 0.25 in mesh. All artifacts were confined to the plow zone.

Five units yielded artifacts: Shovel Test 3, Transect 1; Shovel Tests 1 and 2, Transect 2; and Shovel Tests 1 and 4 in Transect 3 (Table 8-1).

TABLE 8-1

Distribution of Artifacts at Site 41HP74,
Delivery Order Number 7 Study Area

Transect		Str	Depth (cm)	Dart	Flake	FCR/ Cobbles	Total
Unit							
<hr/>							
Tran 1							
ST 3	III	15	--	--	1	1	
Tran 2							
ST 1	III	20	--	1	--	1	
ST 2	III	20	1	--	1	2	
Tran 3							
ST 1	III	20	--	--	1	1	
ST 4	II	5	--	1	3	4	
<hr/>							
Total			1	2	6	9	

In Transect 1, Shovel Test 3 produced one fire-cracked rock at 15 cm below surface. In Transect 2, Shovel Test 1 produced one flake, and Shovel Test 2 produced one Gary dart point (Figure 8-5). In Transect 3, one cobble was recovered from Shovel Test 1, and one flake and three cobbles from Shovel Test 4. In addition to the artifacts from subsurface contexts, eight fire-cracked rocks, one core, and two flakes were collected from the ground surface. All items were Ogallala quartzite. Shovel Tests 1 and 2 in Transect 1 and Shovel Tests 2 and 3 in Transect 3 did not yield artifacts.

Hyatt and Skinner (1971:14) recommended that further testing and possible excavation should be performed at site 41HP74. The results of the 1989 survey and testing indicate that cultural materials are within the plow zone (0-30 cm) at 41HP74, but no cultural features are present. Previous interpretations suggest that this site contains both Late Archaic and Late Prehistoric components. Only lithic materials were recovered in 1989, whereas pottery was recovered in 1970.

Recommendations

Intensive cultivation of site 41HP74 appears to have mixed the site's surficial deposits, and the relatively disturbed deposits noted during the 1989 investigations seem to confirm this observation. Site 41HP74 is classified as requiring further evaluation (Category II) to establish its NRHP eligibility, since there is potential (however low) for the preservation of cultural features (although possibly truncated by plowing) at this locality. It should be noted, however, that as the majority of the sites investigated to date in Cooper Lake are midden mounds similar to 41HP74, further investigations may yield redundant information.

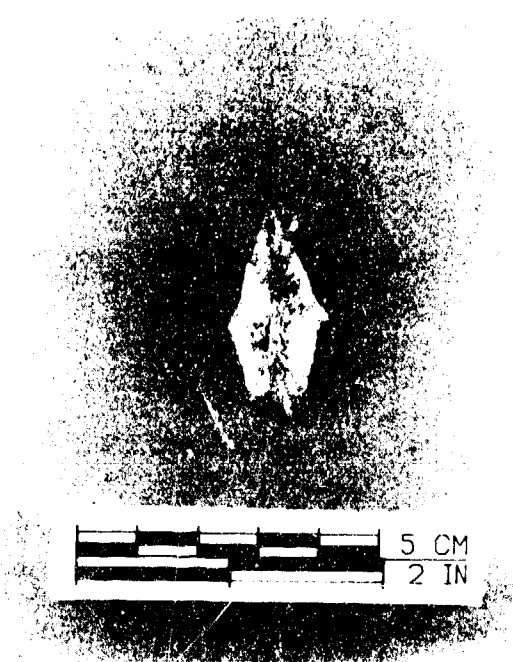


Figure 8-5. Projectile point from site 41HP74, Delivery Order Number 7 study area: Gary dart point (Transect 2, ST 2, 20 cm).

Site 41HP75

This prehistoric and historic site was recorded by SMU in 1970 (Figure 8-6). It is located on a low ridge on the southern edge of the South Sulphur River floodplain, ca. 1.25 km (0.78 mi) south of Merrit Creek and 3.1 km (1.9 mi)

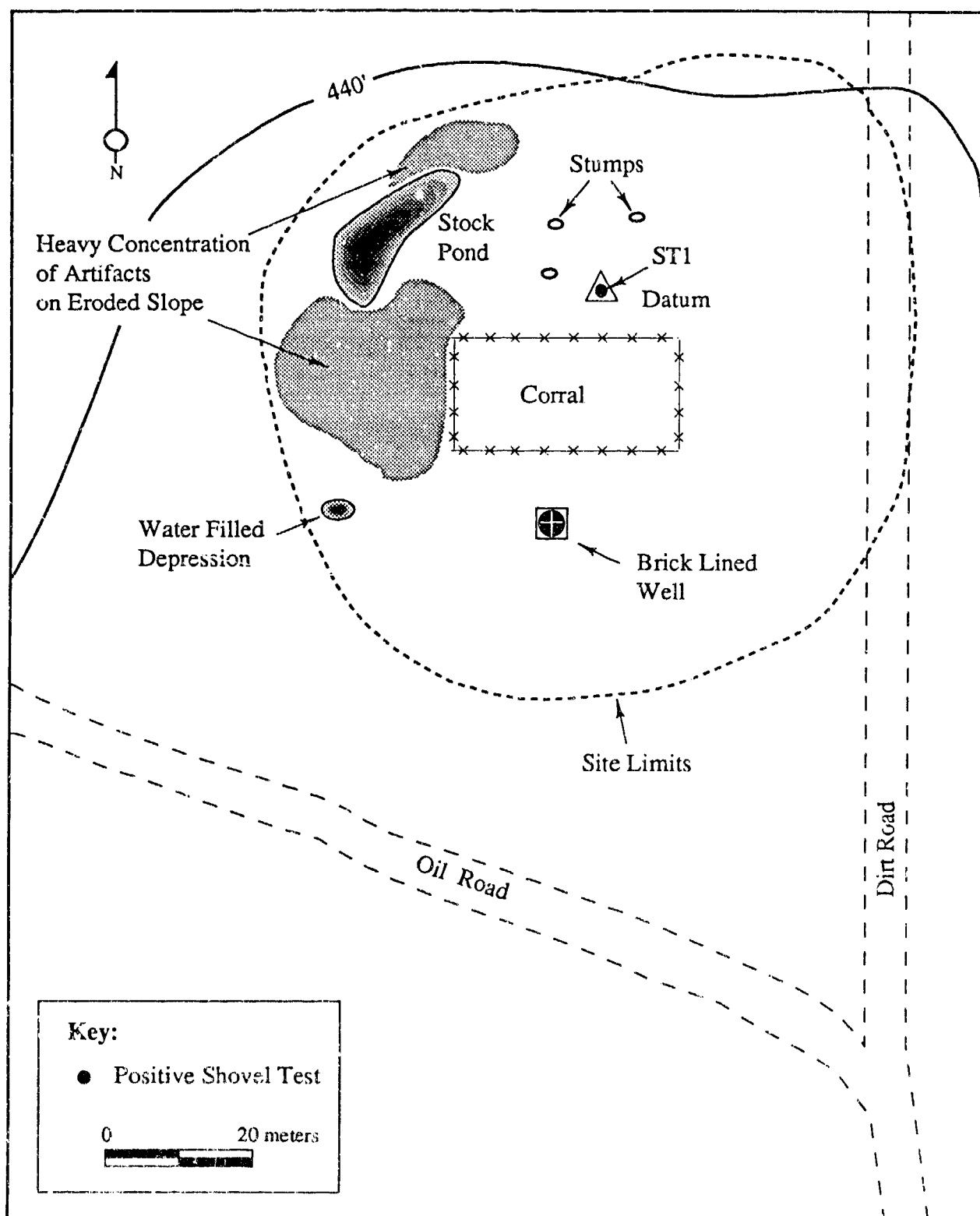


Figure 8-6. Plan of site 41HP75, showing locations of surface features, artifact scatters, and the single shovel test (datum).

north of State Highway 71. Elevation of the site varies from 134-137 m (440-448 ft) above msl, and the mapped soil type is Crockett loam. In its native state, the site was in upland oak forest.

Stratigraphy

Intensive erosion and historic modifications to this site have removed much of the intact soil strata. The two natural soil strata identified at the site are described below from older (lower) to younger (upper).

Stratum I is a light olive brown (2.5Y5/4) clay with a diffuse upper boundary at 25 cm below surface.

Stratum II, the surface stratum at the site, is a brown (10YR4/3) clay.

Archaeological Investigations

In 1970, flakes, cores, bifaces, fire-cracked rock, pottery sherds, and one arrow point were collected from a 750 m² area. The site was assessed as being very disturbed, and no testing was recommended.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. A single shovel test (25 x 25 x 30 cm) was excavated at the site (see Figure 8-6). A permanent datum was placed in this unit.

A corral, a machine-made brick cistern, and the stumps of several old trees were noted west of an old road that enters the site on the east. A stock pond is located northwest of the corral. No domestic structural remains were observed. Lithic debitage flakes, cores, fire-cracked rock, vessel glass, historic ceramics, and an iron hinge were collected from the site in the 1989 survey.

Twenty-one historic items were recovered from the single shovel test, and 39 artifacts were recovered from the surface scatter. Diagnostic refined earthenwares in the assemblage include two Fiestaware specimens (ca. 1930-1960), two decalcomania sherds (1895-1950), and two relief-molded hand-painted porcelains displaying the word "mother." Stonewares in the assemblage included light brown glazed (1890-1930) and opaque Bristol slipped (1875-1930) varieties. One milk glass canning lid (Mason brand) displayed a partial date of "...T [i.e., either September or October] 11, 1922." One aqua Coca-Cola bottle was from Sulphur Springs. The remaining datable items from the site were four continuous-thread ABM fruit jars (1905-1935).

All historic items date to the mid-twentieth century (Table 8-2), and the prehistoric items are neither temporally nor culturally diagnostic. Since the site has undergone significant erosion since 1970, surface exposure was sufficient to evaluate its extent and integrity.

TABLE 8-2

Distribution of Historic Artifacts at Site 41HP75,
Delivery Order Number 7 Study Area

Unit	Stratum	Depth (cm)	Earthen- Ware	Stone- Ware	Bottle Glass	Table Glass	Nail	Misc	Total
ST 1	II	0-22	—	—	19	—	1	1	21
—	Surface	—	7	4	18	3	—	6	38
Total			7	4	37	3	1	7	59

Recommendations

Data from the 1970 investigations at site 41HP75 indicate the presence of a Late Prehistoric period component that possibly represents a campsite. The historic farmstead, which is thought to date to the twentieth century, has severely altered the integrity and potential separation of prehistoric components at the site. Therefore, the site is deemed clearly not eligible (Category III) for nomination to the NRHP, due to its apparent lack of integrity. The present investigations confirmed that no intact prehistoric deposits are preserved at the site, and that the twentieth century farmstead component is representative

of the most frequently encountered historic site type at Cooper Lake. Further investigations would merely yield redundant information for both the Late Prehistoric and Historic periods. If future information is found that warrants additional consideration, 41HP75 will be reevaluated for the NRHP. No further work is recommended.

Site 41HP76

This previously recorded prehistoric site is located 650 m (2,132 ft) west of Mill Branch and 950 m (3,116 ft) south of Merrit Creek (Figure 8-7). It is situated near the top of a north-facing ridge at an elevation of 139 m (455 ft) above

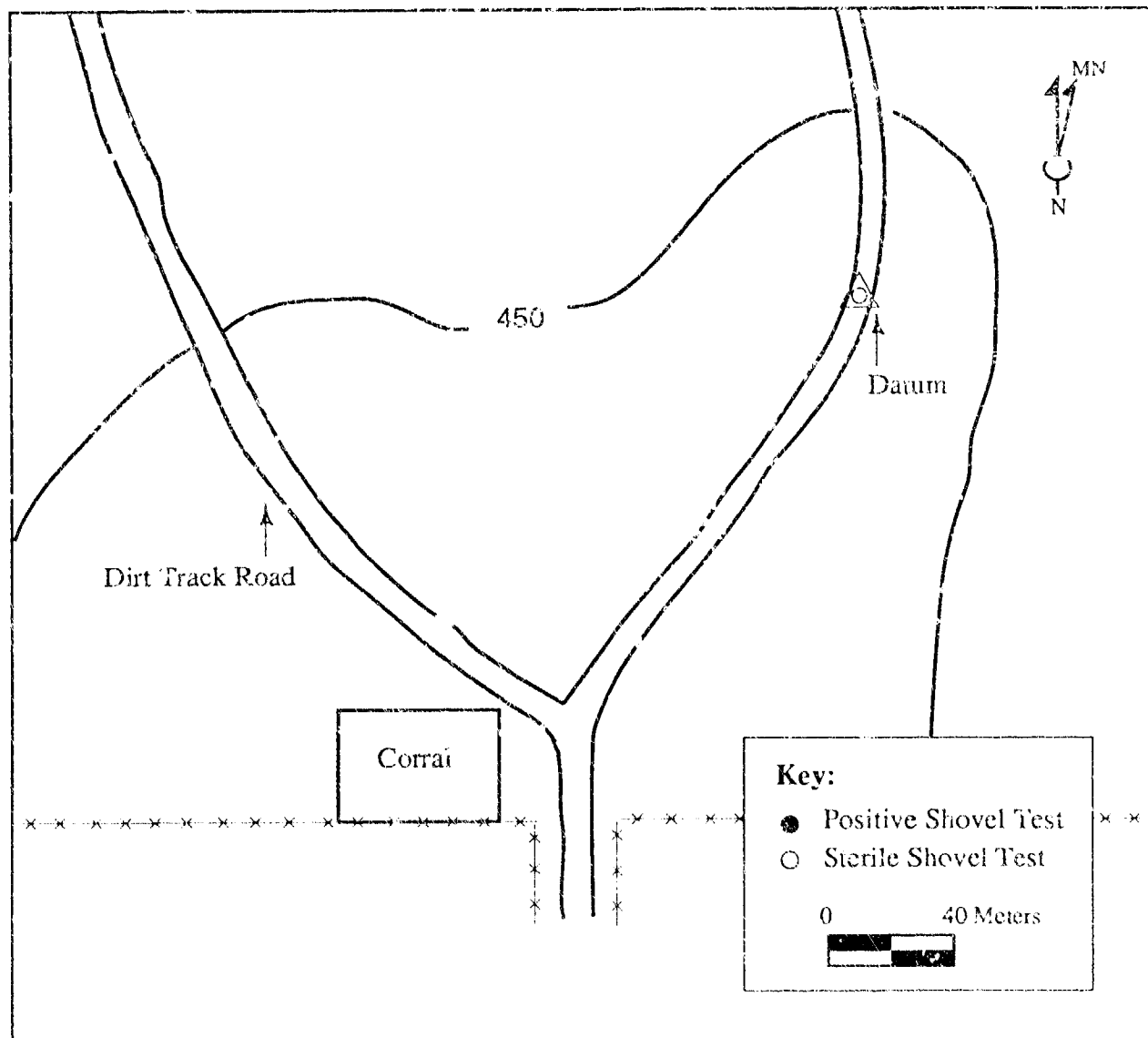


Figure 8-7. Plan of site 41HP76, showing locations of surface features and shovel tests.

msl. The mapped soil type is the Crockett loam. In its native state, this site was in upland oak forest.

Stratigraphy

Two natural strata were defined within the confines of the site locus. These are described below from older (lower) to younger (upper).

Stratum I is horizontally continuous across the site locus and was noted in all units. The overlying Stratum II has been so heavily eroded that Stratum I subsoil (Ellis clay) is exposed over approximately 30% of the site surface area. Vertically, its upper boundary occurs at ground surface to 10 cm (3.93 in) below ground surface and extends to a maximum excavated depth of 17 cm (6.69 in) below ground surface.

Stratum I is a culturally sterile, compact silty clay subsoil that exhibits an almost stonelike hardness when dry. It is wholly lacking in internal stratification and is devoid of pebbles, gravel, or stone fragments. Its dominant color is yellowish brown (10YR5/8) with strong brown (7.5YR5/8) mottles.

Stratum II is horizontally discontinuous across the study area. The underlying Stratum I clay subsoil is exposed in 30% of the site surface area. Vertically, it occurs from ground surface and extends to a maximum excavated depth of 10 cm (3.93 in) below ground surface.

Stratum II is a sandy silt loam remnant with shallow field root systems in its upper limits and exists mainly where ground cover has kept it from being completely eroded. Its dominant color is yellowish brown (10YR5/4).

Archaeological Investigations

When originally recorded in 1970, 18 flakes, 4 cores, and 11 pieces of fire-cracked rock were collected from a road cut. All items were Ogallala quartzite. The site area (ca. 50 m²) was extensively eroded at that time, with only 20 cm of a light loam soil remaining in limited areas along the road. No further work was recommended at that time.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and shovel testing. Surface collections of extensively eroded areas (over 1,000 m²) recovered five flakes, one tested cobble, and one biface fragment. One ironstone fragment and one clear flat glass fragment were also recovered.

An additional phase of shovel testing was conducted in March 1991. A total of 20 prehistoric artifacts were recovered from the surface and upper deposits of Stratum II, including the proximal portion of a Gary-like contracting stem projectile point (Figure 8-8, Table 8-3). All artifacts were recovered from erosional features and were completely out of context. Gary contracting stem projectile points are ascribable to the Late Archaic period (ca. 2500 B.C. to A.D. 700-800; Turner and Hester 1985:101).

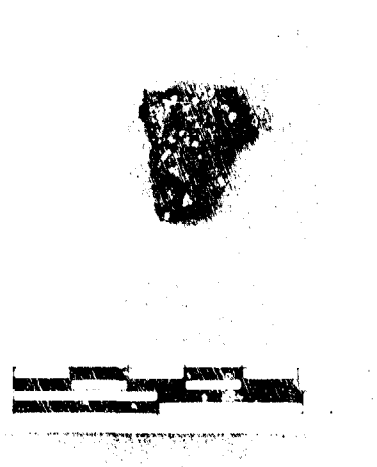


Figure 8-8. Projectile point from site 41HP76, Delivery Order Number 7 study area: Gary-like dart point (surface).

TABLE 8-3

Distribution of Flaked Stone Artifacts from Site 41HP76, Delivery Order Number 7 Study Area, by Excavation Unit, Arbitrary Level, Raw Material Type, and Artifact Technotype

Excavation Unit	Stratum	Level	Cores and Core Fragments	Primary Core Thinning Flakes	Secondary Core Thinning Flakes	Tertiary Core Thinning Flakes	Rifaces and Biface Fragments	Primary Biface Thinning Flakes	Secondary Biface Thinning Flakes	Tertiary Biface Thinning Flakes	Projectile Points/Point Fragments	Specialized Implements	Non-Diagnostic Shatter	Total
E-W LINE														
Probe 2	II	0-10 cm	—	2	—	—	—	4	2	3	—	—	—	11
Surface	—	—	—	—	1	—	—	1	3	2	1 ^a	1 ^b	—	9
TOTAL			—	2	1	—	—	5	5	5	1	1	—	20
PERCENT OF TOTAL			—	10.0	5.0	—	—	25.0	25.0	25.0	5.0	5.0	—	100.0

a Gary-like contracting stem projectile point fragment.

b Unifacially modified blade flake.

NOTE: All flaked stone artifacts are of fine-grained Ogallala quartzite (see discussion of raw material for 41HP159). Two pieces of Gebitage show utilization.

Recommendations

Based on the results of the additional shovel testing at site 41HP76, significant historic or prehistoric cultural resources do not appear to exist within acceptable contextual limits. The two historic items recovered do not appear to represent an intensive domestic occupation. Site 41HP76 has been classified as definitely not eligible (Category III) for the National Register. No further work is recommended at this time.

Site 41HP77

This prehistoric and historic site (Figure 8-9) was recorded as X41HP5 by SMU in 1970

(Doehner, Peter, and Skinner 1978). It is located on the northern end of a north-facing ridge, ca. 800 m (2,624 ft) east of Merrit Creek. Mill Branch is located 600 m (1,968 ft) west of the site. Elevation at the site is 134 m (440 ft) above msl. The mapped soil type is Crockett loam. In its native state, the site was in slope forest consisting of oak, hickory, and other hardwood trees.

Stratigraphy

The natural soil, particularly the surface horizon, has been extensively eroded from this site. Two natural soil strata were identified. Stratum I is a light olive brown (2.5Y5/4) clay. Stratum II is a brown (10YR4/3) clay.

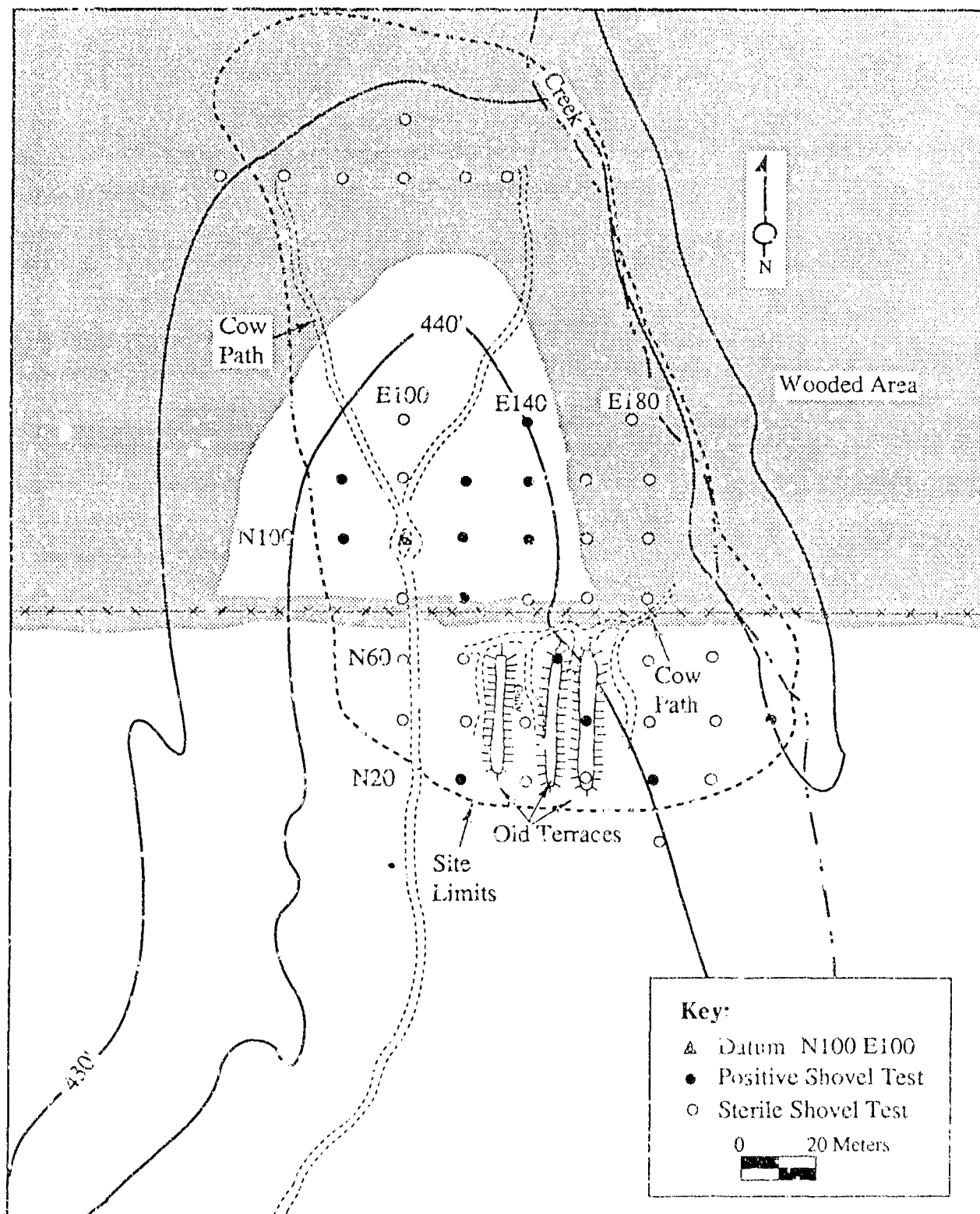


Figure 8-9. Plan of site 41HP77, showing locations of shovel tests and site limits as defined by surface artifacts and positive shovel tests.

Archaeological Investigations

In 1970, the site was described as covering a 450 m (1,476 ft) north-south area along an old road, and 100 m (328 ft) east-west. Surface collections at that time yielded 85 artifacts, primarily fire-cracked rock (70%) and cores and bifaces (15%). Two dart point preforms, three retouched pieces, and a single hammerstone rounded out the assemblage.

In 1976, test units (1 m x 1 m) were excavated in 5 cm levels across the site. The sediment from one unit was water screened. An additional surface collection was made to augment the recovered artifact assemblage. In all, 3,556 artifacts were recovered, 98% of which was Ogallala quartzite. Lithic debris was the dominant artifact class (74%) followed by fire-cracked rock (21%). Ceramics ($n=59$ or 1.6%) were plain with bone and grog temper.

Although Doehner, Peter, and Skinner (1978: 155) identified shell as a tempering agent in ceramics from the site, it is more likely that the sherds examined were tempered with bone, since shell tempering is rare at Cooper Lake. Since none of these sherds were broken by the analyst, the 1978 identification of shell temper is questionable.

Bifaces ($n=44$), cores ($n=23$), retouched pieces ($n=17$), six dart points, and two arrow points rounded out the assemblage. Three dart points were contracting stemmed (Gary-Wells continuum). The arrow points were within the Alba/Bonham range of variability. The prehistoric component at the site was interpreted as an intensely occupied area extending from the crest of the ridge to the floodplain. The serial occupation and high-density of debris suggested habitation.

The historic materials recovered in 1976 consisted of 407 items, 82% of which were from the surface and the top 5 cm of the site. Historic artifacts extended to 20 cm below surface. The historic assemblage was dominated by bottle glass (43%) and metal can fragments (25%). Wire tacks (12%), wire (8%), five machine-made brick fragments, three wire nails, two bolts, and two iron fragments indicated non-domestic activities.

A clay marble (late nineteenth century) and a glass bead (dated to ca. 1850) were the oldest historic items (Doehner, Peter, and Skinner 1978:23).

Informant interviews in 1976 indicated that there had been a sawmill at the site between 1880 and 1930. A sharecropper's house was said to have been present at the site, but no historic buildings were noted in 1976.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, shovel testing, and photography. Agricultural terraces have been constructed at the crest of the ridge, and there has been substantial erosion along the road that bisects the site. A deep gully that has eroded into the eastern portion of the site is bounded by a small stream. To determine whether undisturbed areas of the site were present along the floodplain at the site, 45 shovel tests were excavated (see Figure 8-9).

It was determined that the site does not extend eastward to the floodplain, nor north of the previously defined northern site boundary. Artifacts were recovered from the upper 35 cm in all units. Artifacts recovered include one contracting stemmed dart point (a Wells type), 35 flakes, seven broken flakes, eight unifaces, one early untyped aborted biface, one marginally modified biface, three cores, and fire-cracked rock (Table 8-4; Figure 8-10).

Historic artifacts recovered from surface contexts and excavation units at 41HP77 include one aqua and one clear bottle glass fragments, one clear table glass fragment, and one machine-made brick stamped "J. H. Wilson ...phur Springs Tex." In unit N20E120, the historic bottle glass was recovered 55 cm below ground surface.

The cultural components represented at site 41HP77 include Middle or Late Archaic to Late Prehistoric occupations, a possible Contact period component, and a Historic period occupation probably dating 1880-1930. Previous interpretations of site occupations and functions are supported by the Delivery Order Number 7 fieldwork at the site. This locality is interpreted to have functioned as a lithic reduction site and campsite during the prehistoric occupations, and

TABLE 8-4

Distribution of Artifacts at Site 41HP77,
Delivery Order Number 7 Study Area

Unit	Depth (cm)	Dart	Biface	Uniface	Flake	Core	FCR	Hist	Total
N20E120	35	—	—	—	—	1	5	1 ^a	7
N20E180	25	—	—	—	—	—	1	—	1
N40E160	30	—	—	—	1	1	1	—	3
N40E180	30	—	—	—	1	—	—	—	1
N40E220	42	—	—	—	—	—	2	—	2
N60E150	10	—	—	—	1	—	3	—	4
N80E120	15	—	—	—	3	1	1	—	5
N100E80	15	—	—	—	—	—	1	—	1
N100E120	10	—	—	—	4	—	1	—	5
N100E140	10	—	—	—	1	—	—	—	1
N120E80	20	—	—	—	—	—	1	—	1
N120E120	31	—	1	—	2	—	2	—	5
N120E140	10	—	—	—	1	—	—	2 ^b	3
N140E140	5	—	—	—	—	—	1	—	1
Surface	—	1	—	8	21	—	26	1 ^c	57
Total		1	1	8	35	3	45	4	97

a Vessel glass fragment.

b Vessel glass (1) and table glass (1) fragments.

c Brick fragment.

as both a sawmill and possible tenant farm location during the twentieth century. The glass bead may indicate a light, early Historic or Contact period (possibly Native American) presence at the site. The clay marble is the only suggestion of a late nineteenth century historic presence.

Recommendations

Extreme disturbance by terracing and erosion at the site have reduced the integrity of its cultural deposits. The historic occupation and use of the landform have mixed all components. The site is deemed clearly not eligible (Category III) for

nomination to the National Register. This site contains a range of prehistoric and historic materials that could provide significant information relative to the subsistence, chronology, and material culture questions outlined in the Research Design. However, the lack of vertical separation between its components and the relatively recent and extensive post-depositional disturbance of those components significantly reduce the utility of the recovered data in addressing those research questions. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended.

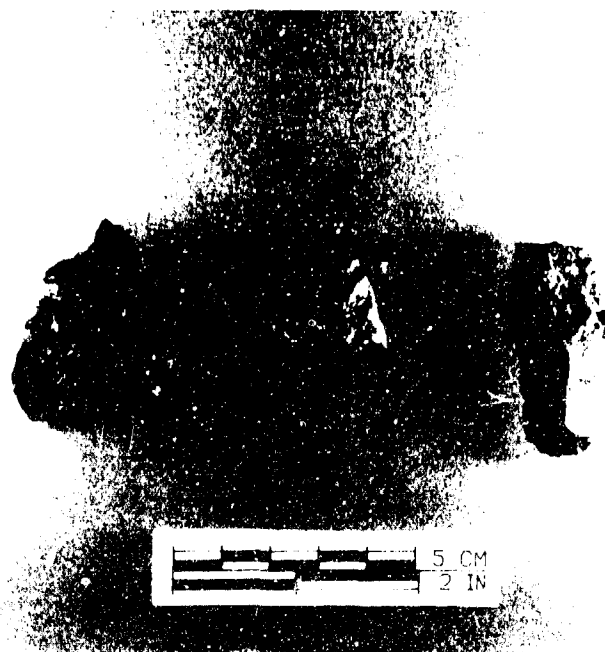


Figure 8-10. Flaked stone artifacts from site 41HP77, Delivery Order Number 7 study area (left-right): biface fragment (N80E140, 0-35 cm), biface fragment (N120E120, 31 cm), Wells dart point (surface).

Site 41HP80

This previously recorded prehistoric site (X41HP11) is located on a west-facing ridge, 300 m (984 ft) east of the South Sulphur River and 2.3 km (1.4 mi) north of State Highway 71. The elevation is 149 m (490 ft) above msl, and the mapped soil types are the Woodtell clay loam and Ellis clay. In its native state, this site was in upland forest dominated by oaks. It has been intensively lumbered in the past and is in second-growth forest today.

Stratigraphy

The Woodtell clay loam and Ellis clay are soils which have formed in weathered clay (or marl) and shale. Where they have not been eroded, a shallow (15 cm) A-horizon is present. Two B soil horizons are also described for the typical Ellis clay soil. As with other sites in this eroded upland, a single stratum was identified. This is a lower B-horizon, which formed from weathered clay shale.

Archaeological Investigations

Site 41HP80 was originally recorded as X41HP11 in 1970. At that time the site was in a recently cleared (i.e., bulldozed) pasture. The site area was 2,000 m², and its deposits were no deeper than 40 cm below ground surface.

In 1970, 534 artifacts were recovered from the ground surface. Flakes comprised 48% of the assemblage, followed by fire-cracked rock (44.7%). Two dart preforms, one dart point (distal fragment), four cores, two bifaces, and 26 retouched pieces rounded out the assemblage. Ninety-five percent of the lithic materials were Ogallala quartzite.

Site 41HP80 (X41HP11) was tested in 1976 and named the Rebel Ridge site (Doehner, Peter, and Skinner 1978:169-174). Additional surface collections were performed, and 11 1-m x 1-m test pits and one 2 m x 2 m test pit were excavated in 5 cm levels (Doehner, Peter, and Skinner 1978:169). The artifact assemblage consisted of 3,740 items, primarily lithic debris (n=1,948) and fire-cracked rock (n=1,715).

Three fragmentary dart points, three endscrapers, 37 bifaces, and 15 retouched flakes comprised the form tools. Finally, 19 cores were also recovered in 1976.

Fieldwork conducted under Delivery Order Number 7 included close interval (20 m) pedestrian reconnaissance. The site boundary was determined based on the distribution of surface artifacts (Figure 8-11). Since the intact portion of the site was outside of the project boundary, no datum was emplaced. This landform is still exposed and eroded. In all, one person day was expended to relocate this site. Due to extensive surface collections in 1970, there is apparently little left of this site. However, four historic artifacts (one handpainted ironstone fragment

[ca. 1850-1860] and three plain ironstones) were recovered from the surface.

Recommendations

Based on the previous recovery of untyped dart points and preforms and the absence of pottery, site 41HP80 appears to date to the Archaic period. However, since the only intact portions of the site lies beyond the project fence, and therefore is not on federal land, it is deemed not eligible (Category III) for the National Register. Should future information be found that warrants additional consideration, it will be reevaluated. No further work is recommended at this time.

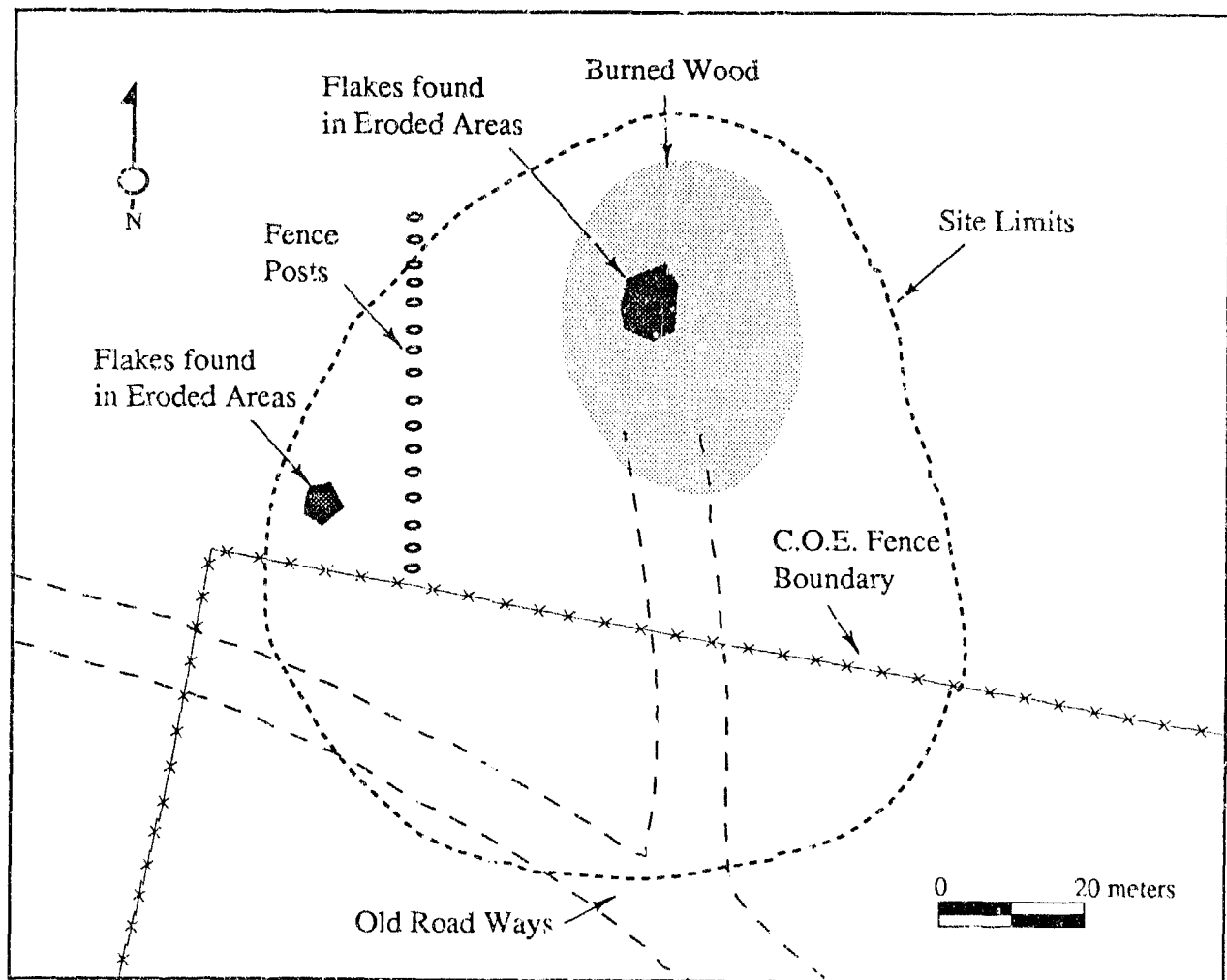


Figure 8-11. Plan of site 41HP80, showing locations of surface features and artifact scatters.

Site 41HP81 (Willow Ann Site)

This previously recorded prehistoric site (Figure 8-12) is located on a west-facing ridge, 300 m (984 ft) east of the South Sulphur River and 2.325 km (1.44 mi) north of State Highway 71. Elevation of the site is 149 m (490 ft) above msl, and the mapped soil types are Woodtell loam and Ellis clay. In its native state, the site was in upland forest dominated by oaks.

Stratigraphy

The Woodtell clay loam and Ellis clay are soils which have formed in weathered clay (or

marl) and shale. No A soil horizon was present at this site. The single stratum identified, a light olive brown (2.5Y5/4) clay that forms the upper portion of the B soil horizon at the site, has been exposed by erosion.

Archaeological Investigations

Site 41HP81 was initially recorded in 1970 and was described then as a small knoll in an old pasture on the western crest of a hill. Fire-cracked rocks and flakes were eroding from the knoll at that time. The surface collection at that time recovered 38 artifacts, primarily flakes (68%) and fire-cracked rock (24%). Two cores and one

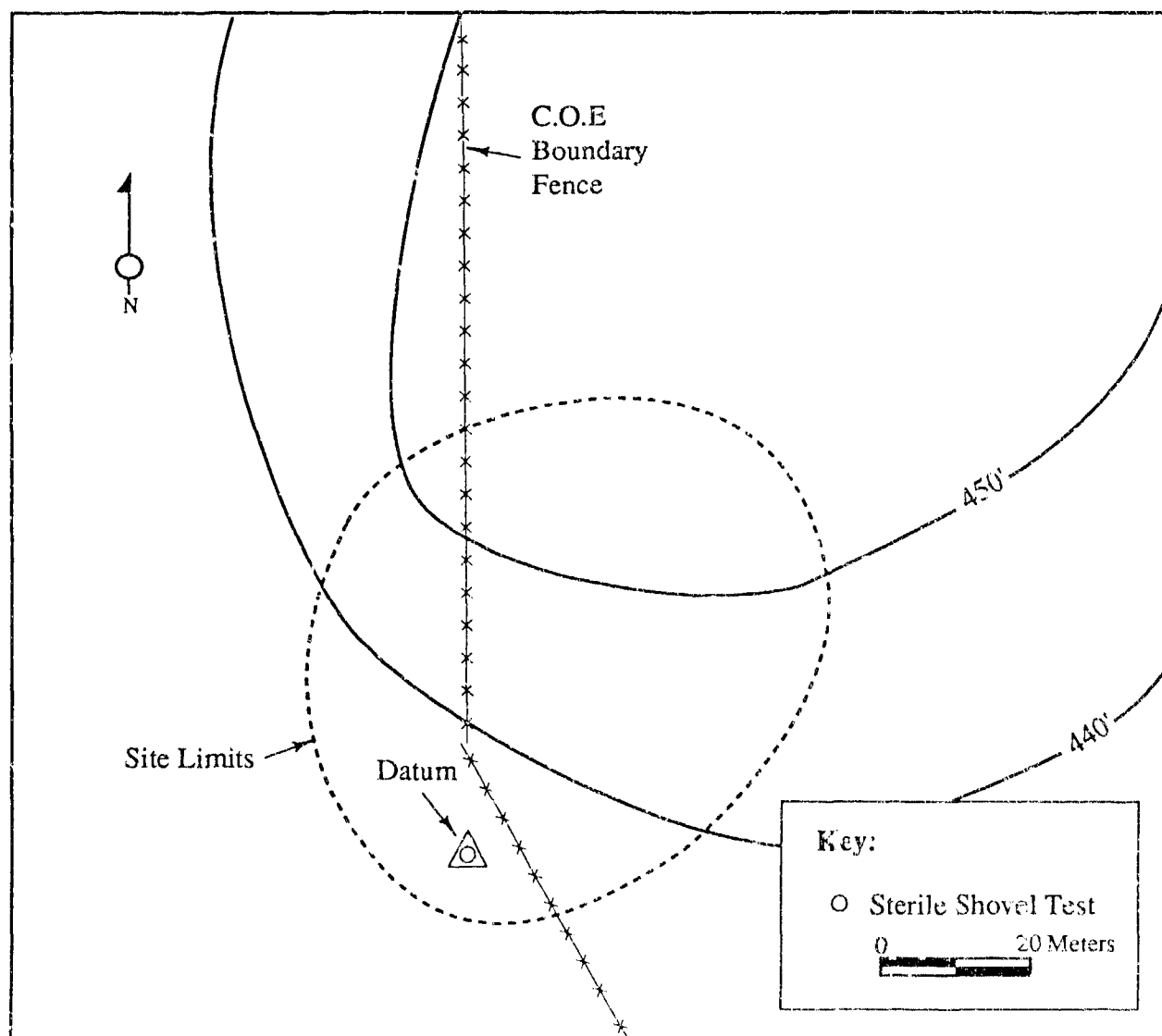


Figure 8-12. Plan of site 41HP81, showing locations of the site datum and limits (as defined by surface artifacts).

Site 41HP81 (Willow Ana Site)

This previously recorded prehistoric site (Figure 8-12) is located on a west-facing ridge, 300 m (984 ft) east of the South Sulphur River and 2.325 km (1.44 mi) north of State Highway 71. Elevation of the site is 149 m (490 ft) above msl, and the mapped soil types are Woodtoll loam and Ellis clay. In its native state, the site was in upland forest dominated by oaks.

Stratigraphy

The Woodtoll clay loam and Ellis clay are soils which have formed in weathered clay (or

marl) and shale. No A soil horizon was present at this site. The single stratum identified, a light olive brown (2.5Y5/4) clay that forms the upper portion of the B soil horizon at the site, has been exposed by erosion.

Archaeological Investigations

Site 41HP81 was initially recorded in 1970 and was described then as a small knoll in an old pasture on the western crest of a hill. Fire-cracked rocks and flakes were eroding from the knoll at that time. The surface collection at that time recovered 38 artifacts, primarily flakes (68%) and fire-cracked rock (24%). Two cores and one

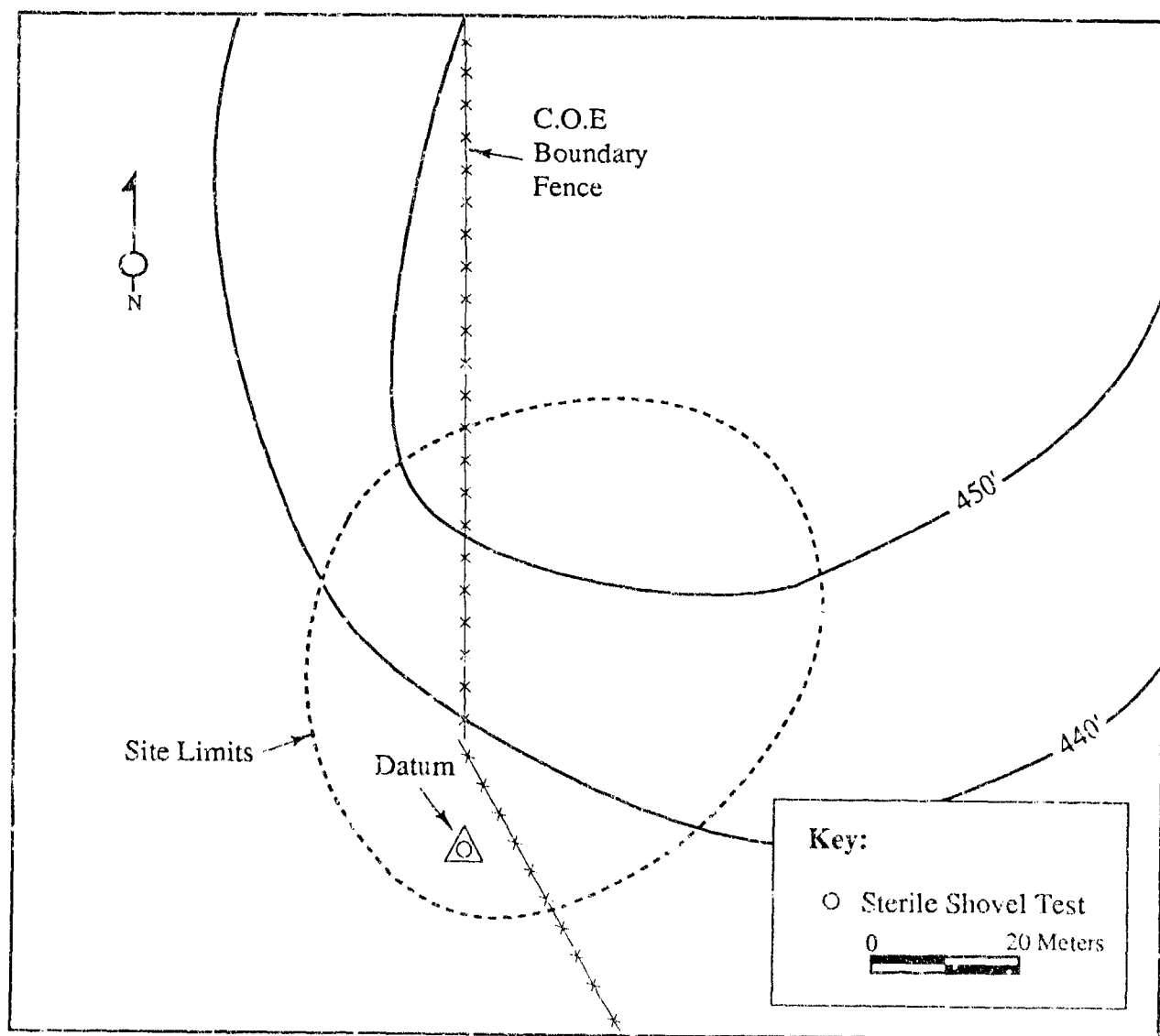


Figure 8-12. Plan of site 41HP81, showing locations of the site datum and limits (as defined by surface artifacts).

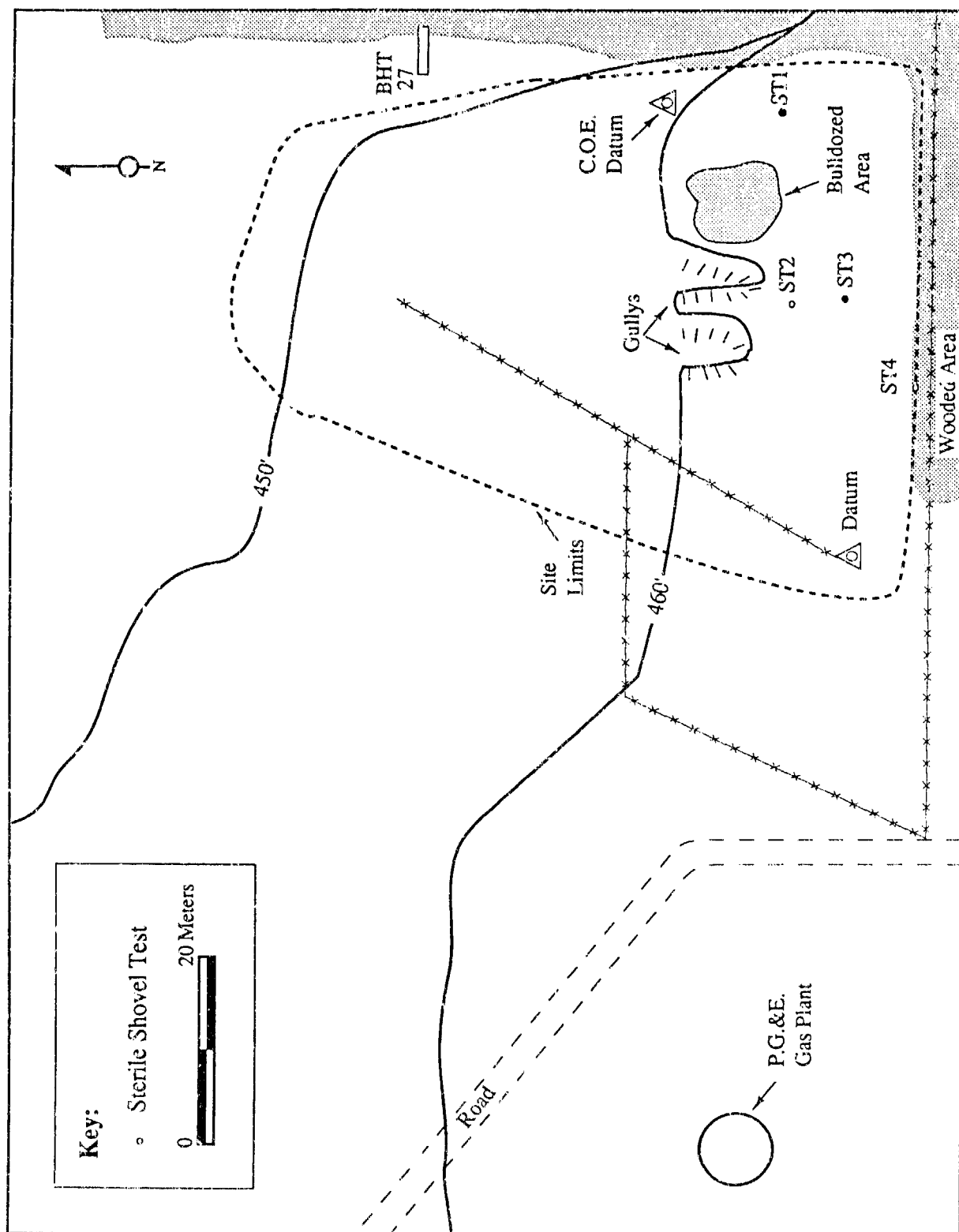


Figure 8-13. Plan of site 41HP82, showing locations of shovel tests, site limits (as defined by surface artifacts) and ground disturbances.

Shovel Test 1, one fire-cracked rock fragment from 0-10 cm in Shovel Test 3, and one flake and one unmodified cobble (naturally occurring) from 0-10 cm in Shovel Test 4. All lithic materials were Ogallala quartzite.

The site is classified as a lithic reduction site due to the lack of finished tools. The prehistoric occupation is unassignable because of the absence of temporally diagnostic artifacts.

Recommendations

The site has been disturbed by Historic period land-clearing and erosion, and is deemed not eligible (Category III) for nomination to the National Register. Since there is a limited range of culturally or temporally diagnostic artifacts, there is no faunal or floral preservation, and because the site is shallow, it has low potential to address the subsistence, chronological, and material culture research questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41HP83

This prehistoric site (Figure 8-14) was originally recorded by SMU in 1970. It is located at the end of a north-facing ridge, 275 m (902 ft) west of Merrit Creek and 2.4 km (1.5 mi) south of the South Sulphur River. The mapped soil type for the site is Ellis clay, and site elevation varies between 140 m (460 ft) and 143 m (470 ft) above msl. In its native state, the site was in upland forest, dominated by oaks, with upland prairies and savannahs to the south.

Stratigraphy

A single soil stratum was identified at site 41HP83. This is the exposed B-horizon of the Ellis clay. This light olive brown (2.5Y5/4) clay is culturally sterile.

Archaeological Investigations

In 1970, flakes and battered cobbles were collected from a 50 m² area. A surface collection at that time yielded 57 artifacts, primarily Ogallala quartzite flakes (54%) and cores (43%). One hammerstone was also present.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit.

When relocated in 1989, the site had been bulldozed and impacted by a gas well installation (see Figure 8-14). Flakes and cobbles were observed in this disturbed area. An informant interview with Brad Slaughter, an employee of Pacific Gas and Electric Company, verified that the site had been disturbed by bulldozing. No temporally diagnostic artifacts were identified at the site. The surface collection consisted of 20 items, including three cores, two fire-cracked rocks, 14 flakes, and one retouched piece. The site is classified as a lithic reduction site of unknown age.

Recommendations

Due to disturbance, the site is classified as clearly not eligible (Category II) for the National Register. The site fails to meet the criteria of significance and has low potential to address the questions outlined in the Research Design. In addition, no temporally diagnostic artifacts are present. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41HP84

This prehistoric site (Figure 8-15) was originally recorded by SMU in 1970. It is located on a east-sloping knoll 150 m (492 ft) west of Merrit Creek. The South Sulphur River is 3.15

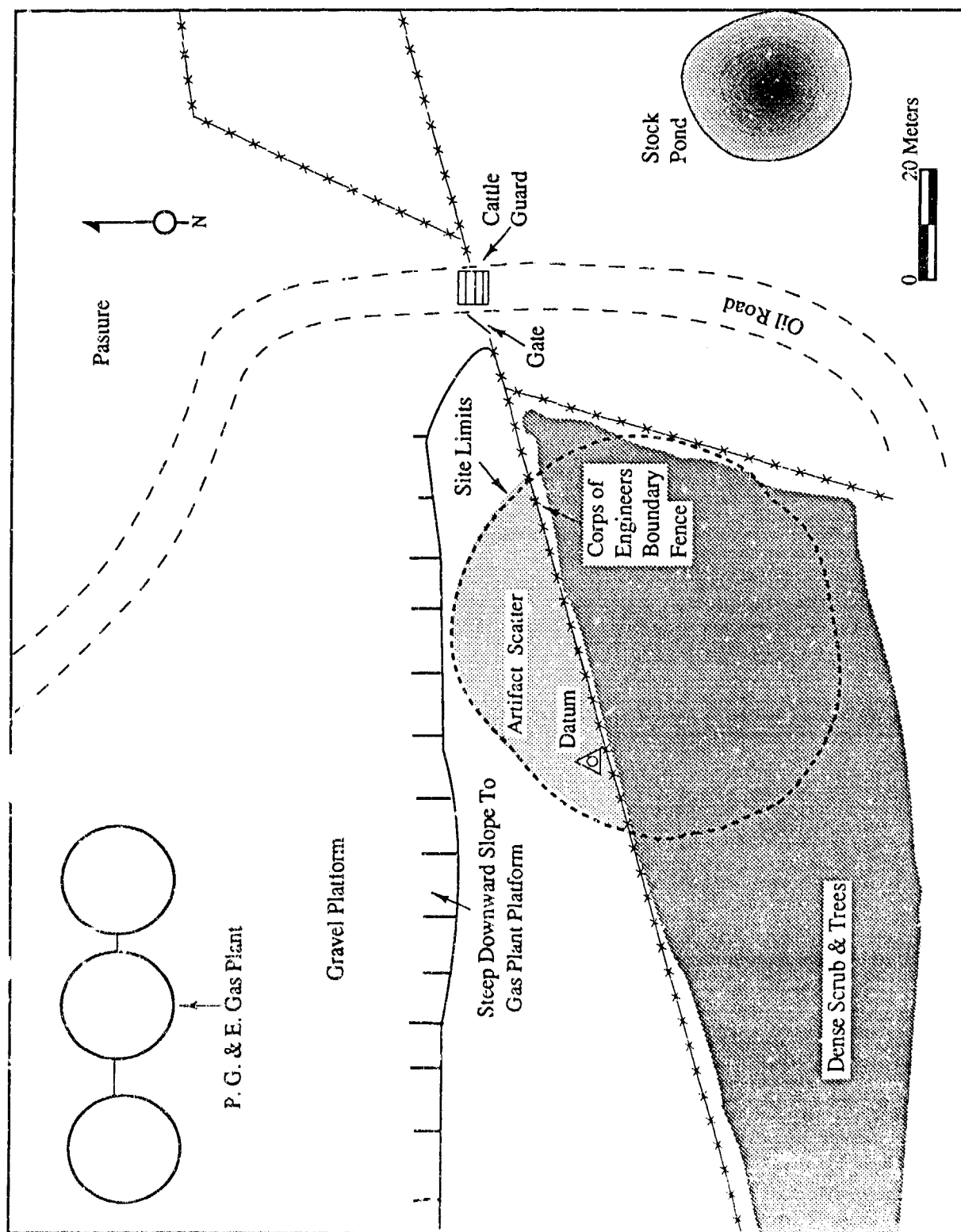


Figure 8-14. Plan of site 41HP83, showing locations of surface artifacts, site limits (as defined by surface artifacts), ground disturbances, and gas plant facilities.

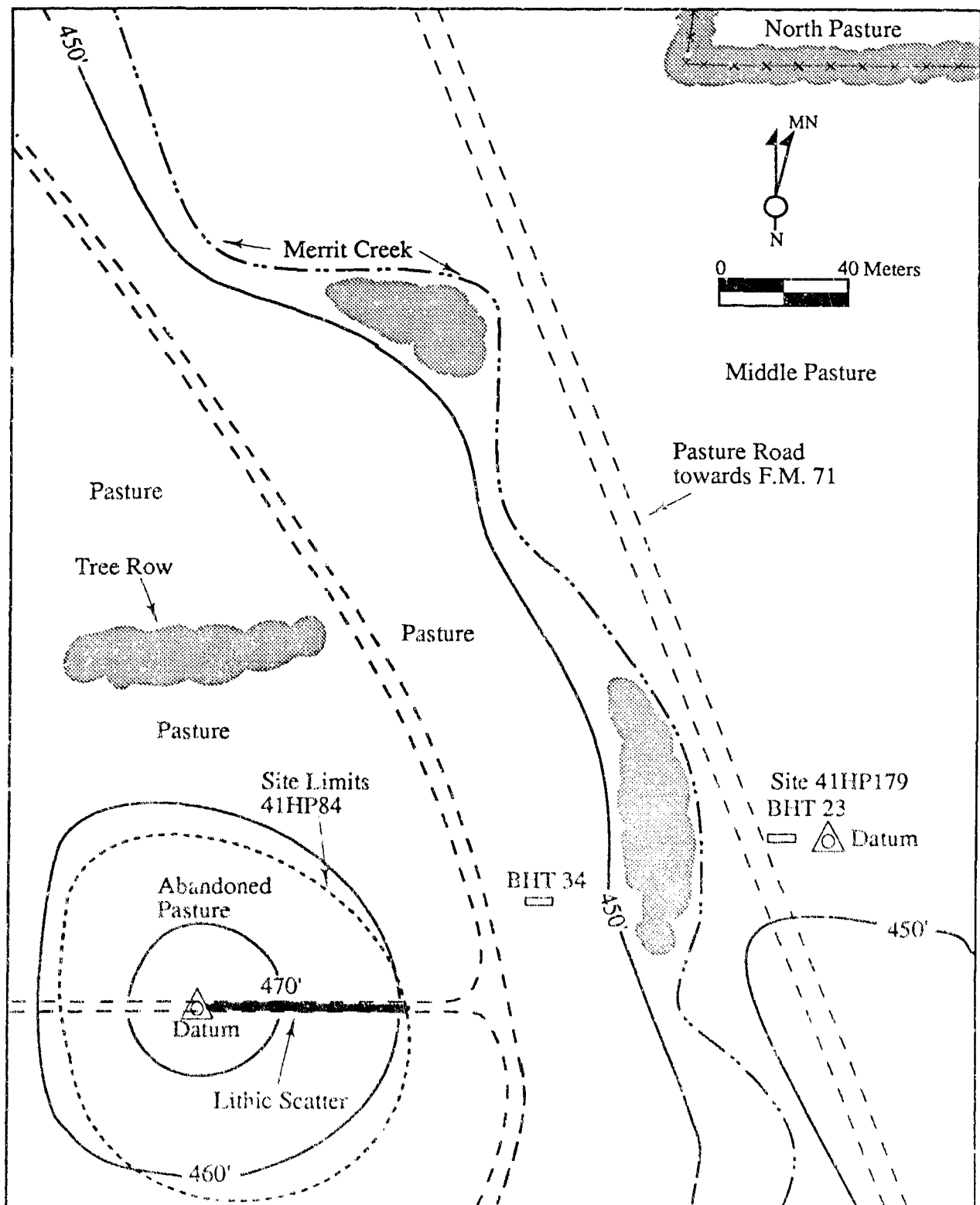


Figure 8-15. Plan of sites 41HP84 and 41HP179, showing locations of site limits (as defined by surface artifacts), site datum excavations, and culturally sterile BHTs 23 and 34.

km (1.96 mi) to the north. Site 41HP82 is located 850 m north of the site. Elevation at the site varies between 140 m (460 ft) and 143 m (470 ft) above msl, and the mapped soil type is Ellis clay. An old road crosses the site from east to west. In its native state, the site was in upland forest dominated by oaks, with areas of upland prairie or post oak savannah on the ridges to the south.

Stratigraphy

The Ellis clay soil at site 41HP84 is eroded, with 5-12% slopes. Backhoe Trench 32, excavated downslope from this site, revealed that the upper soil horizons have been eroded from this landform (see Chapter 6). Two natural strata were identified. Stratum I, the parent material, is a clay marl. Its distinct upper boundary occurs at 1 m below ground surface, and it was excavated to 2 m below surface. The color is a strong brown (7.5YR5/6) with yellowish red (5YR5/8) and light gray (10YR7/1) mottles. Stratum I is culturally sterile.

Stratum II is the eroded B soil horizon. It is a clay loam, with very dark gray (10YR3/1) color. Stratum II is culturally sterile.

Archaeological Investigations

When site 41HP84 was recorded in 1970, it was described as an eroded deposit. Surface collections at that time yielded 191 artifacts, primarily flakes (71%) and fire-cracked rock (22%). Six bifaces, two retouched pieces, one core, one dart preform, one mano, and two pottery sherds rounded out the assemblage. Two chert flakes were present, and all other lithic artifacts were Ogallala quartzite.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. Since the site area was so severely eroded, no shovel tests were excavated. No artifacts were recovered from the excavation of a datum which was placed in the center of the site.

Artifacts were recovered from erosional gullies along the road (see Figure 8-15). These include 12 whole flakes, six broken flakes, two utilized flakes, two shatter, one core fragment, one early aborted biface, and two late aborted bifaces.

All were Ogallala quartzite. These artifacts are scattered along the road over a 350 m² area. It is thought that the site was originally confined to the top of the knoll, but has been washed downslope and totally destroyed. Erosional gullies at the site indicate that there is no potential for intact deposits at the site.

Recommendations

Since the site has essentially been destroyed by erosion, it is thought to be clearly not eligible (Category III) for nomination to the National Register. The lack of temporal or cultural diagnostics, combined with the extensive sheet and gully erosion, contribute to the site's low potential to address the questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41HP85

This prehistoric site (Figure 8-16; see Figure 8-2) was recorded by SMU in 1970. It is located on the crest of a north-facing ridge 350 m (1,148 ft) southeast of the South Sulphur River at an elevation of 143 m (470 ft) above msl. The mapped soil type for the site is Ellis clay. In its native state, the site was in upland forest dominated by oaks with a mixed hardwood forest downhill. A savannah or prairie was located in the uplands to the south.

Stratigraphy

A single soil stratum was identified at this site. This is the exposed B-horizon of the Ellis clay. It is a light olive brown (2.5Y5/4) clay. The few artifacts which were recovered from this stratum are probably present due to plowing, vehicular traffic in wet weather, or livestock trampling.

Archaeological Investigations

When discovered in 1970, flakes, cores, and a biface were collected from eroded areas in a road that crosses the site, over a 350 m² area.

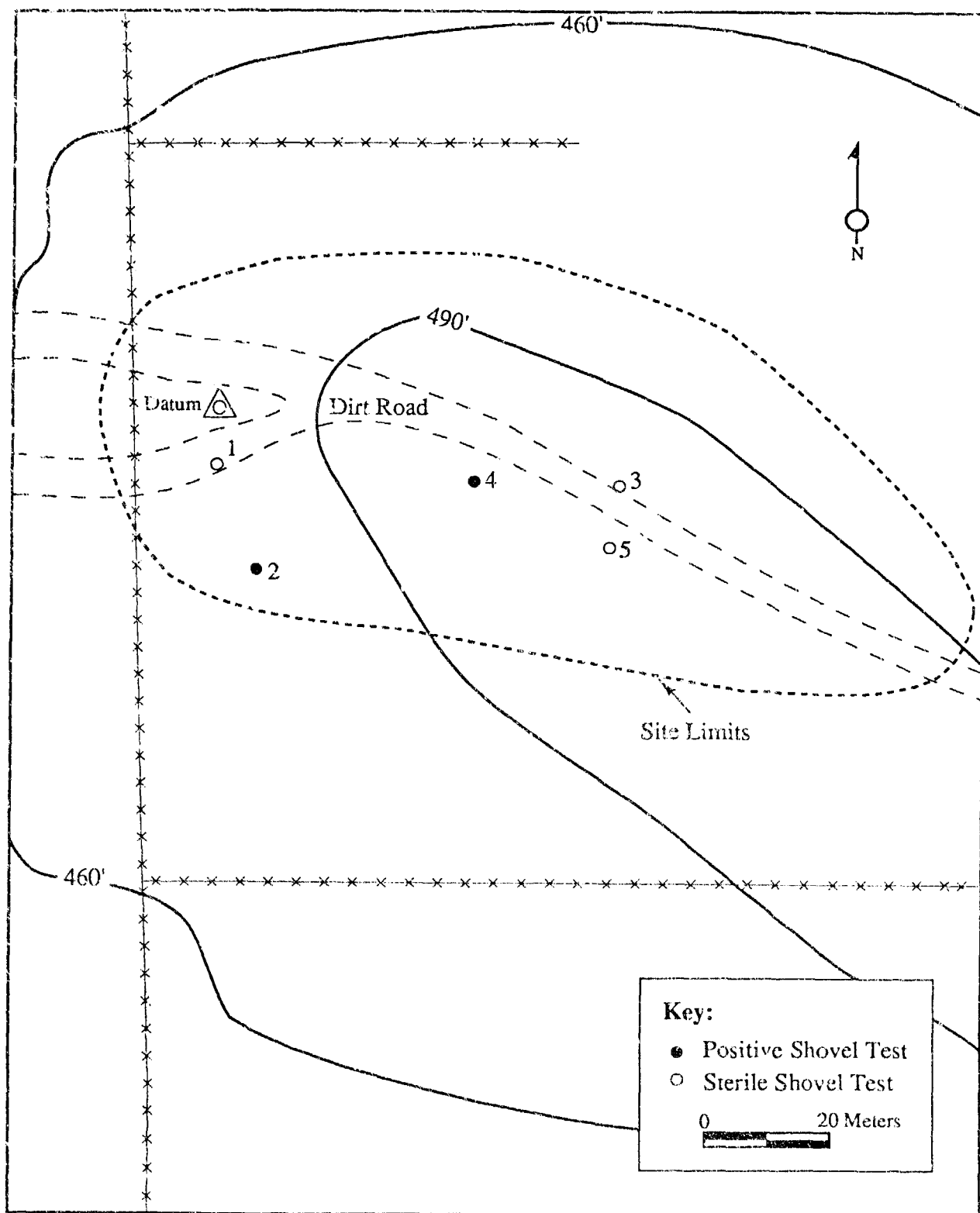


Figure 8-16. Plan of site 41HP85, showing locations of shovel tests and site limits as defined by surface artifacts and positive shovel tests.

A surface collection at that time yielded 97 artifacts, primarily flakes (64%) and fire-cracked rock (30%). In addition, four cores, one biface, and one retouched piece were recovered. All lithic materials were Ogallala quartzite.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The shovel test (25 cm x 25 cm x 30 cm) excavated for the site datum was sterile. In all, five shovel tests were excavated at this site (see Figure 8-16), three of which were sterile. Two flakes were recovered from Shovel Test 2 (ST 2) and one flake and a bone fragment from ST 4 (Table 8-5). These artifacts were recovered from 4-8 cm below ground surface, and the units were excavated to 35 cm and 23 cm below ground surface, respectively.

The artifact assemblage recovered from excavation units and surface contexts at 41HP85 consisted of 10 items (see Table 8-5). Three flakes and one bone fragment were from excavation units. Three flakes, one Gary dart point fragment (Figure 8-17), one core, and one fire-cracked rock were surface collected. All lithic materials were Ogallala quartzite.

Recommendations

The occupation of this site is classified as unknown prehistoric. The high percentage of lithic debitage suggests that lithic reduction was a major activity at the site. Although the archaeological

remains could answer lithic technology research questions, site 41HP85 is recommended as not eligible (Category III) for nomination to the National Register. Its shallow deposits lack both archaeological integrity and temporal diagnostics that may be used to address chronological questions. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.



Figure 8-17. Projectile point from site 41HP85, Delivery Order Number 7 study area: Gary dart point (surface).

TABLE 8-5

Distribution of Prehistoric Artifacts at Site 41HP85,
Delivery Order Number 7 Study Area

Unit (cm)	Depth Dart	Gary	Flake	Core	Bone	FCR	Total
ST 2	35	---	2	---	---	---	2
ST 4	23	---	1	---	1	---	2
Surface	0	1 ^a	3	1	---	1	6
Total		1	6	1	1	1	10

^a Fragment

Site 41HP86

This previously recorded prehistoric site is located on the north-facing slope of the upland escarpment at the edge of the South Sulphur River floodplain, 100 m (328 ft) east of the river (see Figure 8-2). The elevation of the site varies between 137 m and 140 m (450 ft and 460 ft) above msl, and the mapped soil type is Bazette clay loam. In its native state, the site was in slope forest consisting of mixed hardwoods.

Stratigraphy

The four natural soil strata identified at site 41HP86 are described from oldest (lowest) to youngest (uppermost). Stratum I, a yellow clay, is the weathered marl which forms the Bazette clay loam. It has been exposed by clear cutting and erosion along the roadway throughout the site. The upper boundary varies from 2 cm to 18 cm below ground surface, and it was excavated to 25 cm below surface. Stratum I is culturally sterile.

Stratum II is a light brown clay which is discontinuous across the site and was encountered in only one shovel probe (Shovel Test 2). This may be a remnant of the original B soil horizon at the site. Stratum II is culturally sterile.

Stratum III is a dark brown clay which is also discontinuous across the site and was found only in Shovel Test 2. Although Shovel Tests 2 and 3 were located in wooded (i.e., revegetated) areas, only Shovel Test 2 contained an organically enriched A soil horizon.

Stratum IV is a layer composed of decomposed leaves and was continuous across the site, except for the roadway. This was the only soil stratum which contained cultural materials. Since the entire landform was cut over several decades ago and the present forest is secondary growth, this layer has formed recently.

Archaeological Investigations

When recorded in 1970, flakes, cores, and bifaces were observed eroding out of a road cut on the site over a 15 m-long area. The site was judged to be less than 50 cm deep in 1970 and was described as being at the edge of the terrace. A surface collection at that time yielded 119 artifacts,

primarily flakes (71%) and fire-cracked rock (17%). In addition, five cores, five bifaces, three retouched pieces, and one untyped arrow point were recovered. All remains were Ogallala quartzite.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, surface collections, and shovel testing of the reported site. Cultural materials actually extended farther upslope than was described in 1970. The single shovel test (35 cm x 35 cm x 15 cm) excavated at the site for a reference datum was culturally sterile (see Figure 8-2). Three flakes and four fire-cracked rock fragments were collected from the road.

The shovel testing program conducted in March 1991 at site 41HP86 consisted of the excavation of three shovel probes at 25 m intervals. These shovel tests ranged in size from 30 cm x 30 cm to 50 cm x 50 cm and were excavated from 20 cm to 25 cm below ground surface. Since the landform containing site 41HP86 was clearly eroded and was in a non-aggrading upland setting, the purpose of these shovel tests was to determine whether any intact cultural deposits were present. A single flake of petrified wood was recovered in Shovel Test 2, 5 cm below ground surface. Based on the arrow point recovered in 1970, site 41HP86 is classified as a lithic reduction site dating to the Late Prehistoric period.

Recommendations

Site 41HP86 has low potential to address the chronological, material culture, and subsistence questions outlined in the Research Design. Although the artifact samples collected during the 1970 and 1989 excavation are representative of the Late Prehistoric period and include a diagnostic arrow point from that time, all materials cannot be associated with this time period. The lack of firm component separation reduces the site's potential to address the subsistence, temporal, and material culture research questions. Any data recovered from this site could also be redundant, since the large majority of sites investigated at Cooper Lake have dated to the Late Prehistoric period. Due to the road and fence

construction as well as intense erosion, the site has poor integrity. The site is deemed clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41HP87

This site is located outside of the reservoir, beyond the CE fence.

41HP88 (Razor's Edge)

This previously recorded site (Figure 8-18; see Figure 8-2) is located at the base of a west-facing hill at the edge of the South Sulphur River floodplain. It is on the edge of the river and is 2.9 km (1.8 mi) north of State Highway 71. Elevation at the site varies between 134 m and 137 m (440 ft and 450 ft) above msl, and the mapped soil type is Bazette clay loam. In its native state, the site was in floodplain forest dominated by oaks. The area has been cut over for lumber and presently is in second-growth forest, except where vehicular traffic has removed all vegetation.

Stratigraphy

Two natural strata were identified at site 41HP88. Stratum I, the yellowish clay B-horizon, is a weathered marl. Stratum I is culturally sterile.

Stratum II is discontinuous at the site and appears to have eroded and redeposited in several areas, due in large part to vehicular traffic. It is a medium brown clay which was observed in a single excavation unit. No artifacts were recovered from this stratum.

Archaeological Investigations

When recorded in 1970, this site was extremely disturbed with surface littering by sportsmen. A surface collection at that time yielded 165 artifacts, including flakes (74%), four cores, three bifaces, fire-cracked rock (17%), and six retouched pieces. An untyped arrow point and ceramic sherd were collected from a 100 m²

area. Site deposits were noted in 1970 as shallower than 50 cm, eroded, and extensively disturbed.

In 1976, site 41HP88 (X41HP20) was tested and additional surface collections were made. In all, six 1 m x 1 m units were excavated in 5 cm levels and screened through 0.25 in mesh. One unit was selected for water screening, but the high density of fire-cracked rock hindered this process (Doehner, Peter, and Skinner 1978:165-169). The recovery of Alha/Bonham arrow point styles suggested the presence of an Early Caddoan occupation, but no ceramics were recovered. Furthermore, the large volume of fire-cracked rock suggested either lithic heat treatment or food processing activities, but the site was interpreted as a short, low-intensity occupation.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, subsurface shovel testing, mapping, and photography. Ten whole flakes, one utilized flake, one core, and one piece of shatter were surface collected from the site. Two shovel tests (25 cm x 25 cm x 25 cm) were excavated in the vicinity of the site (see Figure 8-18), and both were culturally sterile. Shovel Test 1, excavated within the site boundaries proper as a permanent datum, did not contain an A-horizon. However, a 9 cm thick A-horizon was identified in ST 2, excavated ca. 10 m east of the site's eastern boundary. No intact cultural deposits appear to remain at the site.

Recommendations

Site 41HP88 is thought to be a Late Prehistoric period lithic reduction site and camp. As severe erosion has reduced the site's archaeological integrity, it is considered clearly ineligible (Category III) for nomination to the NRHP. Although the presence of an Early Caddoan occupation at 41HP88 (Doehner, Peter, and Skinner 1978) could potentially address important chronology questions outlined in the Research Design, the site's deposits are too poorly preserved to merit further study. Should information be found that warrants future consideration, 41HP88 will be reevaluated for NRHP eligibility. No further work is recommended.

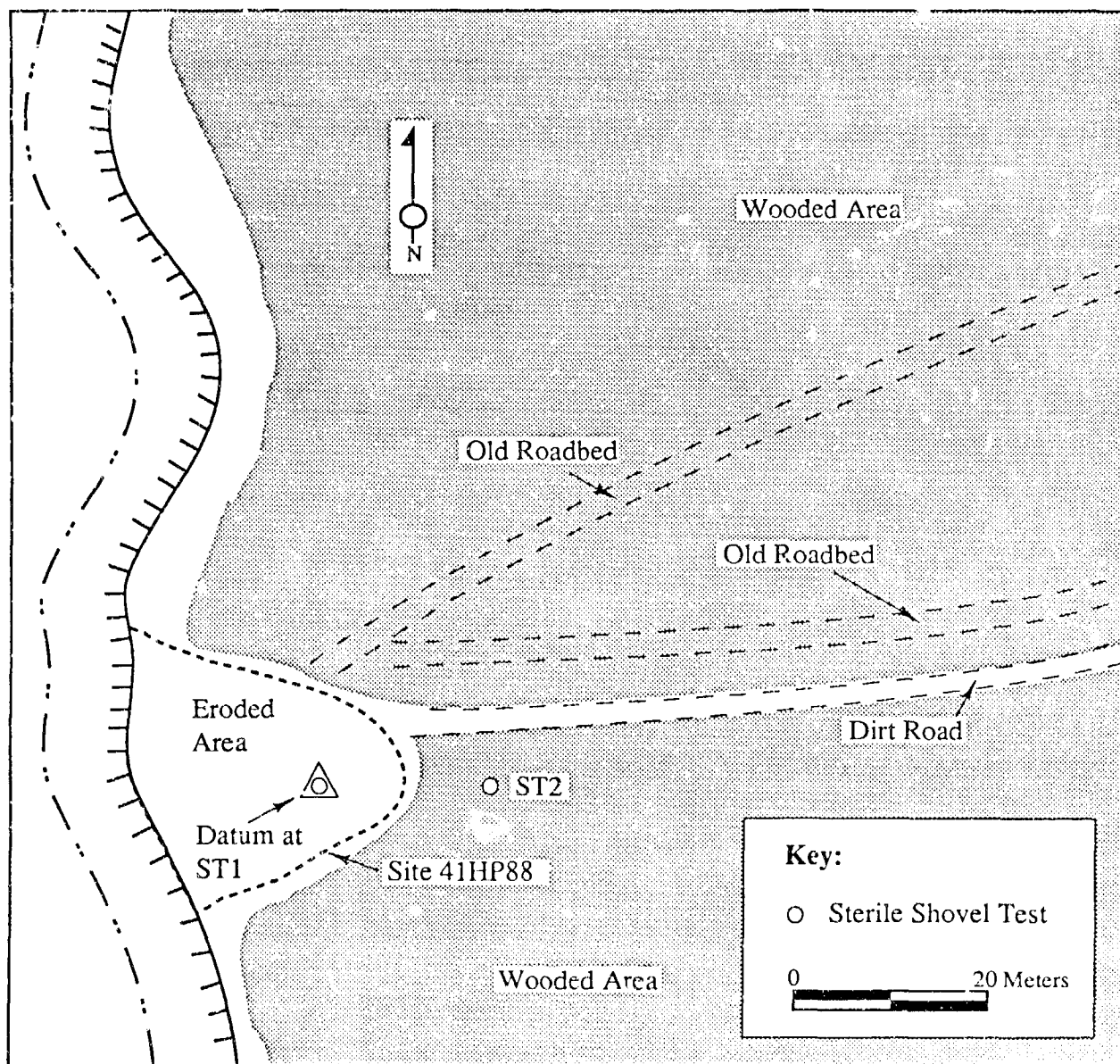


Figure 8-18. Plan of site 41HP88, showing locations of shovel tests and site limits as defined by surface artifacts.

Site 41HP89

This site is located outside of the reservoir, beyond the CE fence.

Site 41HP90

This previously recorded prehistoric and historic site (Figure 8-19) is located on a northwest-trending ridge spur, 100 m (328 ft) southeast of the South Salphur River. The

elevation of the site, as originally plotted, is 140 m (460 ft) above msl. The mapped soil types at the site are Ellis clay and Bazette clay loam. In its native state, the site was in upland forest dominated by oaks. The area has been cut over in the past and is in second-growth forest today.

Stratigraphy

Two natural strata were identified at site 41HP90. Stratum I is continuous across the site.

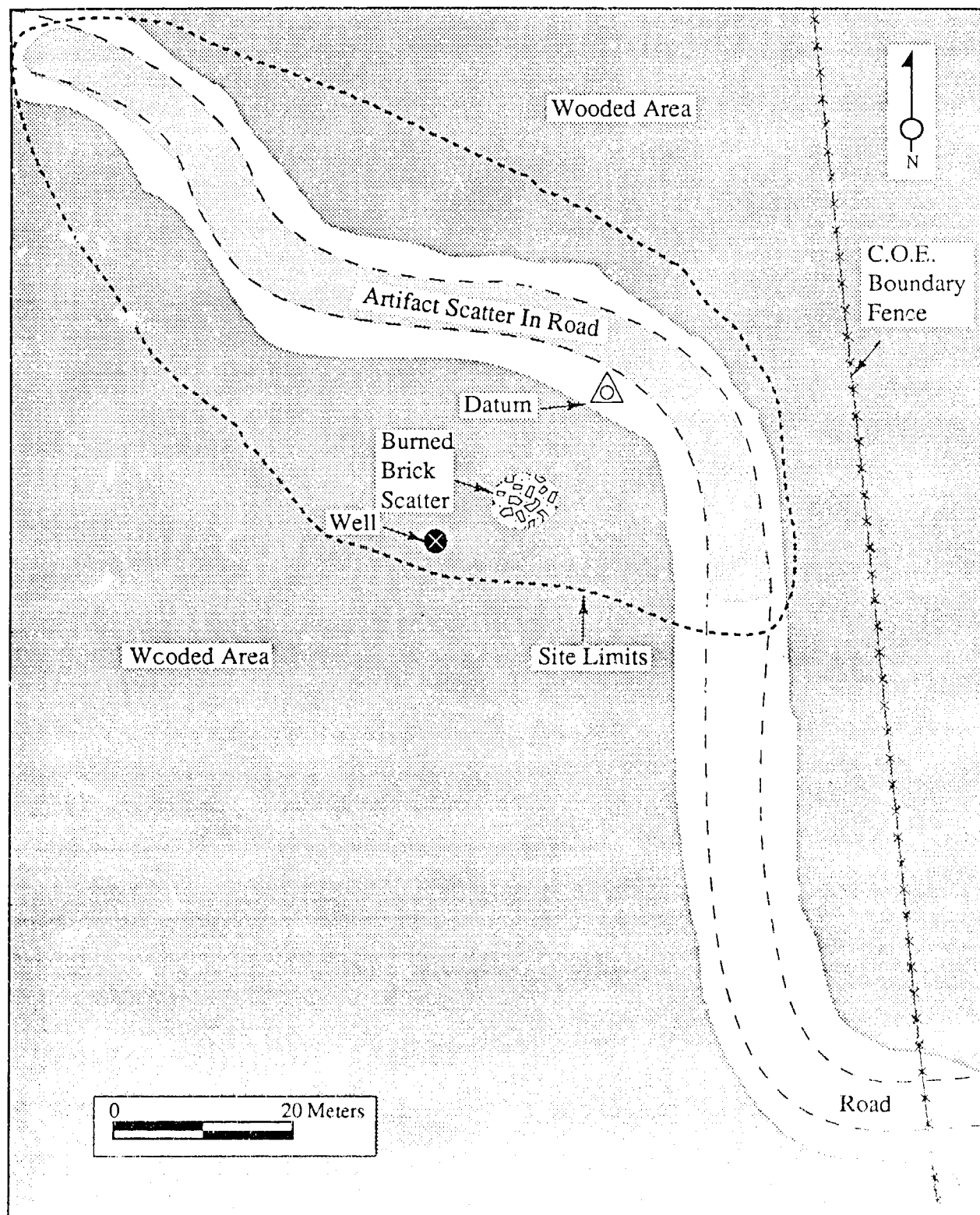


Figure 8-19. Plan of site 41HP90, showing locations of surface artifacts, aboveground features, and site limits as defined by surface artifacts.

It is the B-horizon of the weathered marl which forms the Bazette and Ellis clay soils. Stratum I is light olive brown (2.5Y5/4) in color. Its upper boundary occurs at 2-5 cm below ground surface, and it was excavated to 30 cm below ground surface. Stratum I is culturally sterile.

Stratum II is discontinuous at the site due to intensive erosion. It is an organic horizon ranging from 2-5 cm thick, which has formed from leaf litter. Stratum II is culturally sterile.

Archaeological Investigations

When originally recorded in 1970, flakes and fire-cracked rock were observed eroding out of the ridge, extending down to the river bank. A surface collection at that time yielded only nine artifacts, including four flakes, one biface, and four fire-cracked rocks. All were Ogallala quartzite.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile (see Figure 8-19). A permanent datum was placed in this unit.

No additional prehistoric artifacts were collected from this site. The road has essentially destroyed the prehistoric component of the site. A historic farmstead is present on the eastern portion of the prehistoric site, with no spatial separation of the two components. The road turns southward in this portion of the site. Near the turn in the road, a subsurface depression, possibly a storm cellar, is located to the southwest of the road. A scatter of commercial twentieth century bricks was also identified west of the bend in the road. Southwest of the brick scatter, a commercial brick well is present. Historic artifacts collected include vessel glass, stoneware, buttons, and unidentified iron fragments. This historic occupation dates to the second and third quarters of the twentieth century.

In summary, the prehistoric component at the site is classified as an unknown prehistoric lithic reduction site, although no artifacts were identified during the present survey to confirm this ascription. The historic component dates to the twentieth century. The extreme dispersion and

low-density of the prehistoric component at the site, and the impingement of the historic occupation into that portion of the site, appear to have affected integrity of subsurface features, if they were present at all.

Recommendations

The recent age of the historic farmstead detracts from this site's potential to address the historic settlement and material culture questions outlined in the Research Design. Moreover, this component would most likely yield redundant information, since it dates to the period of the most intensive use of Cooper Lake, the twentieth century. The intensive use of this landform during the Historic period has essentially destroyed the integrity of the prehistoric remains. The site is deemed clearly not eligible (Category III) for nomination to the National Register because it fails to meet the criteria of significance. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41HP107

This prehistoric site is located outside of the reservoir, beyond the CE fence.

Site 41HP110

This historic farmstead (Figure 8-20) is located on a north-trending ridge 960 m (3,148.8 ft) east of Merrit Creek, at an elevation of 143-144 m (470-472 ft) above msl. An intermittent drainage lies 200 m (656 ft) east of the site. The site lies on the west side of a modern gravel road that enters the reservoir from the village of Peerless. An old road bed enters the site from the east and may originally have provided access to the site. A gas pipeline has impacted the southeastern portion of the site. Sites 41HP75 and 41HP187 lie on the same north-trending ridge. The mapped soil type at the site is Crockett loam. In its native state, the site was in upland post oak savannah. Today this area is a fallow pasture.

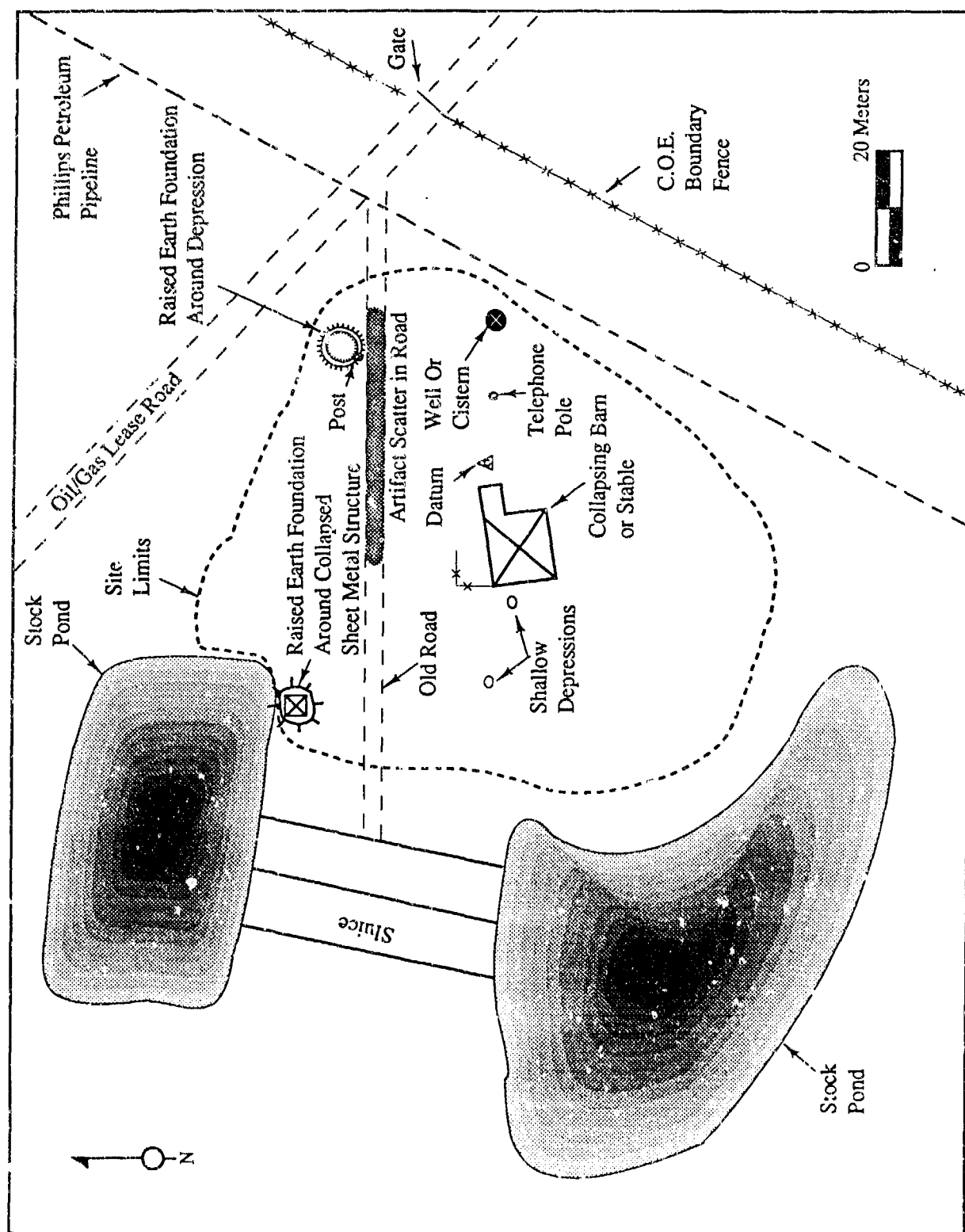


Figure 8-20. Plan of site 4IHP110, showing locations of surface artifacts and features, aboveground disturbances, and site limits as defined by surface artifacts and features.

Archival Background

Site 41HP110 is located within the G Merrick Survey (A-653). In 1936, site 41HP110 was included in a 40.47 ha (100 acre) tract of land which belonged to Jeff D. Lindley of Ridgeway. He obtained the land in 1916 as part of an estate division (Hopkins County Deed Book 92:143). There were no improvements noted at the location of site 41HP110; however, a house and barn were indicated on the WPA plat map at the eastern margin of the Merrit Creek floodplain.

This farmstead was occupied by a tenant in 1936. At that time, 0.2 ha (0.5 acre) was reserved for the dwelling, 0.2 ha (0.5 acre) for the garden, 23.9 ha (59 acres) in pasture, 12 ha (30 acres) in cultivation (4 ha [10 acres] of corn, 8.1 ha [20 acres] of cotton with 0.1 bale/ha [0.25 bale/acre]), and 4 ha (10 acres) were wasteland. The dwelling measured 24 ft x 24 ft and was built in 1923. A 12 ft x 12 ft barn had been built in 1924. It is possible that the plat map for the Jeff D. Lindley tract is in error (since these were rapid sketches) and that site 41HP110 is indeed this tenant farmstead which was started in 1923.

Archaeological Investigations

Site 41HP110 was originally recorded by Frewitt and Associates, Inc., during an archaeological survey for the above-mentioned gas pipeline. This site was described as a twentieth century farm, with a collapsed house and ornamental shrubs (Bousman 1986: 5). No site area was indicated. The Texas Historical Commission made a determination in August 1986 that this site was ineligible for the National Register and recommended no further work.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit.

Subsurface features and artifacts were observed in a central area of over 6,000 m² with an additional 32,000 m² area of stock tanks and pipeline (see Figure 8-20). Several features were recorded at the site. A cistern or well lined with machine-made bricks is present in the southeastern

portion of the site, adjacent to the pipeline. A barn or stable with an associated corral is located 30 m west of the cistern. A raised earth feature is located 40 m northwest of the barn. Dimensions of this latter feature are 6.5 m x 5.5 m. Sheet metal is scattered over this feature. Two stock ponds are located 60-70 m to the northwest and west of the barn or stable.

An artifact scatter is visible in an old west-trending road and extends from the stable or barn to 50 m east. The scatter consists of fragmented whiteware and bottle glass. Ten historic artifacts were recovered from the surface of 41HP110. The assemblage consists of refined earthenwares (n=5), stoneware (n=1), two glass fragments, and a button. The refined earthenwares include four ironstone/whitewares (1840-1910) and one pure white porcelain specimen. The stoneware is brown salt glazed, dating ca. 1890-1930. The two-hole metal button is machine made. One clear bottle glass fragment with a corrugated pattern dates ca. 1940 to the present. The single manganese solarized bottle glass sherd dates ca. 1880-1920. Two recovered shattered cobbled fragments derive from the nearby gravel road.

Recommendations

These artifacts support an occupation dating from the turn of the century to perhaps the mid-twentieth century. Due to the recent occupation and pipeline construction, and with the concurrence of the SHPO, site 41HP110 is not eligible (Category III) for nomination to the National Register. Archival and informant researches indicate that there is no known historical significance for this property under Criteria A, B, or C. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41HP111

Site 41HP111 is a prehistoric site which is located on a sloping ridge, 1.9 km (1.2 mi) south of the Sulphur River and north of Peerless. The elevation of the site is 139 m (456 ft) above msl, and the mapped soil type is a Hazette clay. In its

native state, the site was in upland post oak forest. It has been cut over and cleared, and today is open with a field road passing directly through the site.

Stratigraphy

The three natural strata identified at this site represent modern erosion and redeposition. There is no natural A soil horizon on the typical Bazette clay, which is an eroded soil developed in weathered marl and shale. Stratum I is a yellowish brown clay, which is weathered bedrock. It has an abrupt upper boundary at 24 cm below surface and was excavated to 30 cm below ground surface. Stratum I is culturally sterile.

Stratum II is a reddish oxidized clay which contains diffuse charcoal. This zone probably represents the historic land surface which contains charcoal from the burning of fields or clearing of vegetation. No artifacts were recorded *in situ* in this stratum.

Stratum III is the surface soil horizon. It is a very dark grayish brown (10YR3/2) clay. No artifacts were identified within this stratum or on the undisturbed ground surface.

Archaeological Investigations

This site was originally recorded by Prewitt and Associates, Inc., during an archaeological survey for a gas pipeline in 1986. Site forms were not on file with TARL when visited by SMU personnel in 1989. A letter report on this site was provided in September 1990.

In 1986, a small number of Ogallala quartzite flakes and fire-cracked rock (no counts given) were recovered in the eroded farm road. No artifacts were noted *in situ* or in a single shovel test excavated in an area beside the road. The site area was defined as encompassing ca. 15 m² and was confined to the road itself.

Bousman (1986:5) interpreted this site to be totally eroded, out of context, and with only a scatter of prehistoric materials. The thin soils and non-aggrading topographic setting indicated that the charcoal and prehistoric artifacts were probably not associated. No further investigations were recommended in 1986.

The gas pipeline was rerouted to avoid this

site, and the excavation associated with the pipeline construction in the vicinity of the site was monitored (Fields and Garvey 1986:2). Additional shovel tests (no number given) were excavated. This site was confirmed to be a small surface scatter. About 30 flakes and ca. 20 fire-cracked rocks were noted in the rerouted pipeline construction area, but all were on the surface (Fields and Garvey 1986:3). This information indicates that the site was considerably larger than originally defined, and the rerouted pipeline did not avoid the site.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance in the area of the site, as indicated on USGS maps. As noted above, a site form was not on file at TARL, and the letter report on the site was not made available until after the completion of the Delivery Order Number 7 fieldwork. In all, one person day was expended in an attempt to relocate this site and in the survey of the surrounding landform.

Recommendations

There are no intact cultural deposits at site 41HP111, and no temporally or culturally diagnostic artifacts have been recovered from it. The site is deemed clearly not eligible (Category III) for the National Register. The Texas SHPO, in a letter dated August 25, 1986, recommended the excavation of two 1 m x 1 m units; however this was not done, since the site was judged to be surficial.

Site 41HP119

This previously recorded site is located in the Merrit Creek floodplain at 139 m (445 ft) above msl. The soil type is a Nahatche clay loam. The native vegetation was a hardwood forest, but presently the site area is pasture that is heavily grazed by cattle.

Stratigraphy

Four natural strata (all culturally sterile) were identified in Backhoe Trench 1 (Figure 8-21), which was excavated in the mapped location of

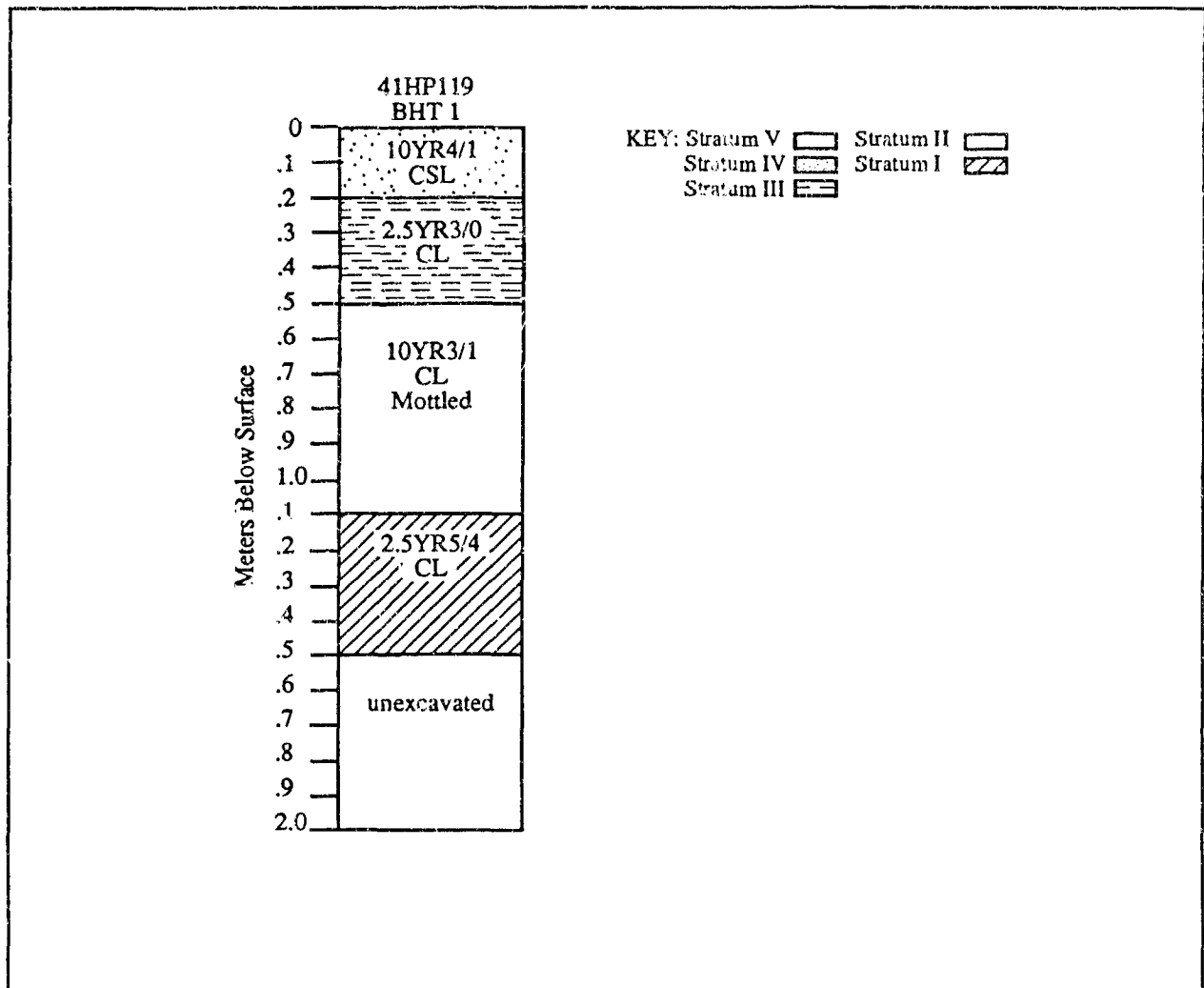


Figure 8-21. Stratigraphic profile of BHT 1 at site 41HP119.

site 41HP119 (see Chapter 6, Merrit Creek Floodplain).

Stratum I is a light olive brown (2.5Y5/4) clay loam with calcium carbonate concretions. It has a diffuse upper boundary at 1.1 m below surface and was excavated to a depth of 1.5 m.

Stratum II is a very dark gray (10YR3/1) clay loam with light olive brown (2.5Y5/4) mottles. It has a diffuse upper boundary at 50 cm below ground surface.

Stratum III is a very dark gray (2.5Y3/0) clay loam, which may have been the prehistoric land surface. It has a distinct upper boundary at 20 cm below ground surface.

Stratum IV is a dark gray (10YR4/1) silty clay loam with light brownish gray (10YR6/2) mottles. Possibly derived from recent flooding, it is the historic plow zone.

Archaeological Investigations

Site 41HP119 was originally recorded by Prewitt and Associates, Inc. during an archaeological survey for a gas pipeline (Bousman 1986). Following recommendations, the investigators observed trenching activities and examined trench walls and backdirt. The site was defined on the basis of scattered fire-cracked rock and flakes and a single biface observed in a 125 m long east-west profile, from 30-73 cm below ground surface (Fields and Garvey 1986). This zone corresponds to Strata II and III, discussed above. On the basis of this data, extensive prehistoric deposits were predicted in the Merrit Creek Valley (Fields and Garvey 1986:3).

Fieldwork conducted under the terms of Delivery Order Number 7 included close

interval (i.e., 5 m) pedestrian survey and the excavation of backhoe trenches in the mapped site area and along Merrit Creek to the west. Two person days were expended in the relocation of site 41HP119, in addition to the backhoe investigations.

The only cultural material noted at this site during the Delivery Order Number 7 investigations was a single Ogallala quartzite flake found on the site surface. This site is similar in setting to several other low-density scatters (e.g., sites 41HP156, 41HP159, and 41HP160) along Finley Branch to the east.

The cultural remains identified by Fields and Garvey (1986) were extremely diffuse, averaging one artifact per 6 m of linear trench exposure. Despite the prediction that extensive prehistoric deposits may exist at this locality, the present investigations indicate that these dispersed, low-density scatters of fire-cracked rock are not continuous across the Merrit Creek Valley.

Recommendations

The low density of cultural remains, plus the location of the site in what historically has been an intensively cultivated floodplain, detracts from its potential to address the questions outlined in the Research Design. Moreover, the lack of temporally diagnostic artifacts and definable concentrations of artifacts or activity areas reduces the site's potential to address chronological, technological, and material culture research questions. Thus, site 41HP119 is deemed ineligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the site.

Site 41HP159

This site is located on the eastern side of Finley Branch very close to the proposed junction with the water intake for the North Texas Municipal Water District plant (Figure 8-22). This part of Finley Branch has a straightened channel which has come to bypass the older natural channel to the south and east. In its native state, this area was a post oak forest, but it has been

cleared and intensively cultivated and has undergone severe modifications to the landscape during the Historic period.

Stratigraphy

Five natural strata were identified in backhoe and trackhoe excavations at site 41HP159 (Figures 8-23 to 8-29). These strata are discussed in order from the oldest (lowest) to youngest (uppermost). All strata contained cultural materials, primarily fire-cracked rock. Two possible hearths (i.e., concentrations of fire-cracked rock) and a chipping station or tool manufacturing area were identified. These features were concentrated in Stratum I, although dispersed materials were noted in all strata.

Stratum I is a yellowish brown (10YR5/6) compact silty clay loam. It has a wavy, indistinct upper boundary at 37 cm below surface. It was excavated to 1.4 m below surface. Darker soil lenses, possibly indicative of chute channels along Finley Branch (noted as intrusions in the stratigraphic illustrations), are present in this stratum.

Stratum II is a dark yellowish brown (10YR3/4) silty clay loam. It is discontinuous across the site. Its distinct wavy upper boundary occurs 25-75 cm below the surface.

Stratum III is a very dark gray (10YR3/1) silty clay loam. It has a diffuse upper boundary at 25 cm below surface.

Stratum IV is a pale brown (10YR6/3) silt loam. It has an abrupt upper boundary at 15-20 cm below surface.

Stratum V is a gray (10YR5/1) silt, which is discontinuous across the site. It is structureless and probably represents overbank deposition (see Chapter 6).

In October 1989, during the additional testing by SMU archaeologists, Dr. S. Christopher Caran, in consultation with Dr. Rolfe Mandel, visited the site. A prominent buried paleosol is present in this area. The paleosol is beneath a 35-60 cm deep deposit of fine silty overbank alluvium. The paleosol is characteristically an 80 cm thick, cumelic A-horizon above a clayey Bg-horizon. The dated hearth (Feature 1) is located within the base of the Bg-horizon at 1.35-1.5 m below surface.

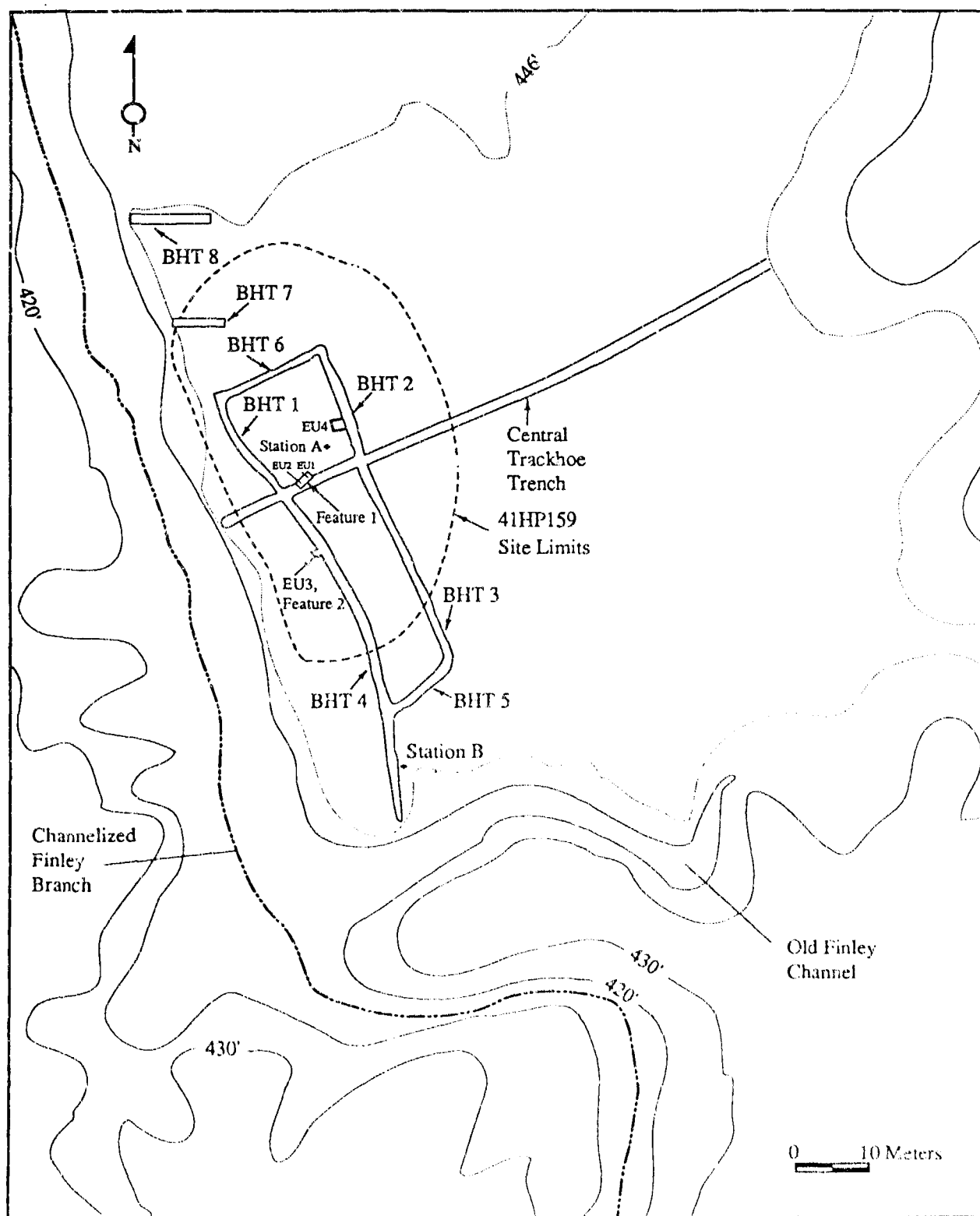


Figure 8-22. Plan of site 41HP159, showing the locations of backhoe trenches, test units, and site limits.

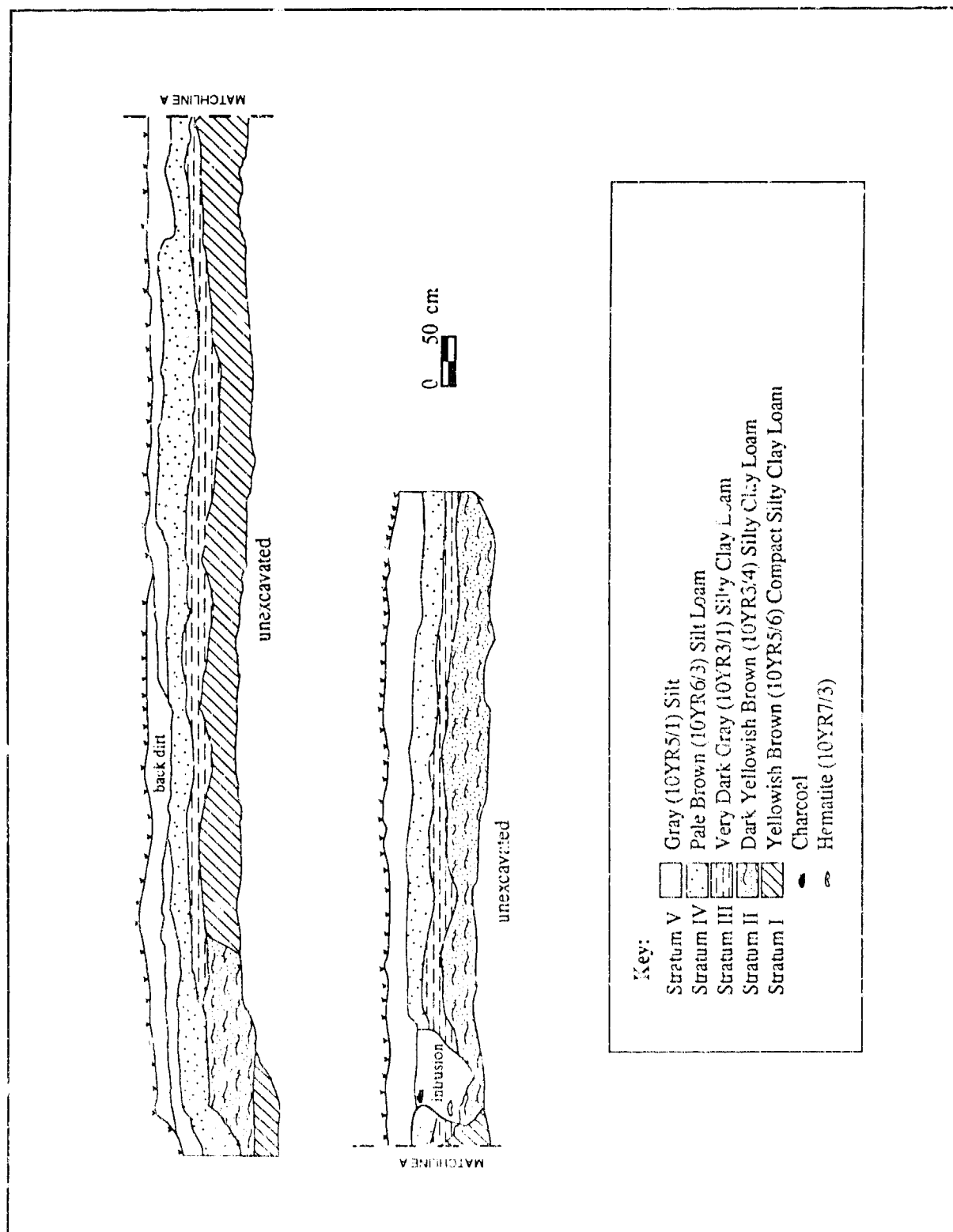


Figure 8-23. Stratigraphic profile of BHT 1 at site 4HP159, facing west.

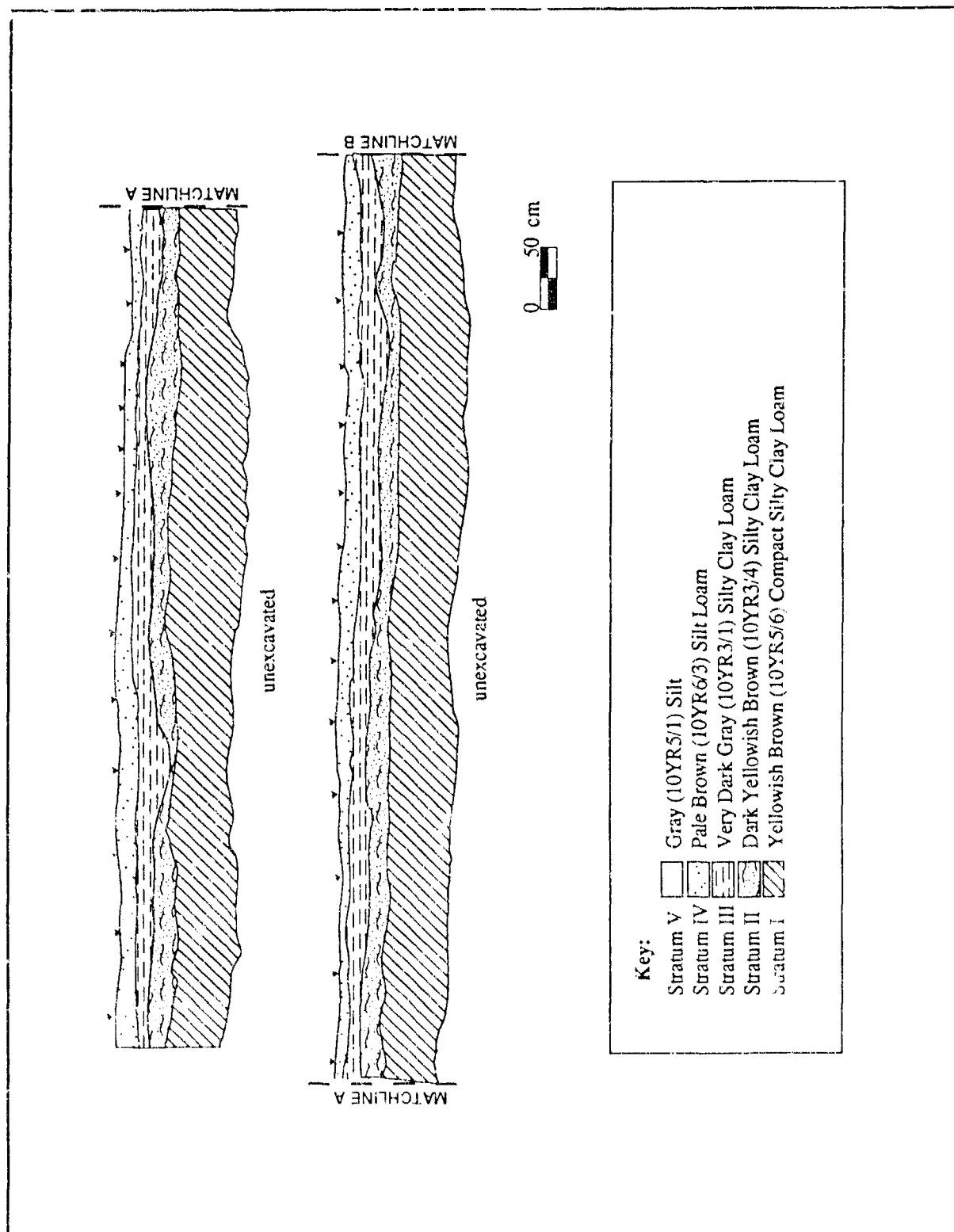


Figure 8-24. Stratigraphic profile of BHT 2 at site 41HP159, facing west.

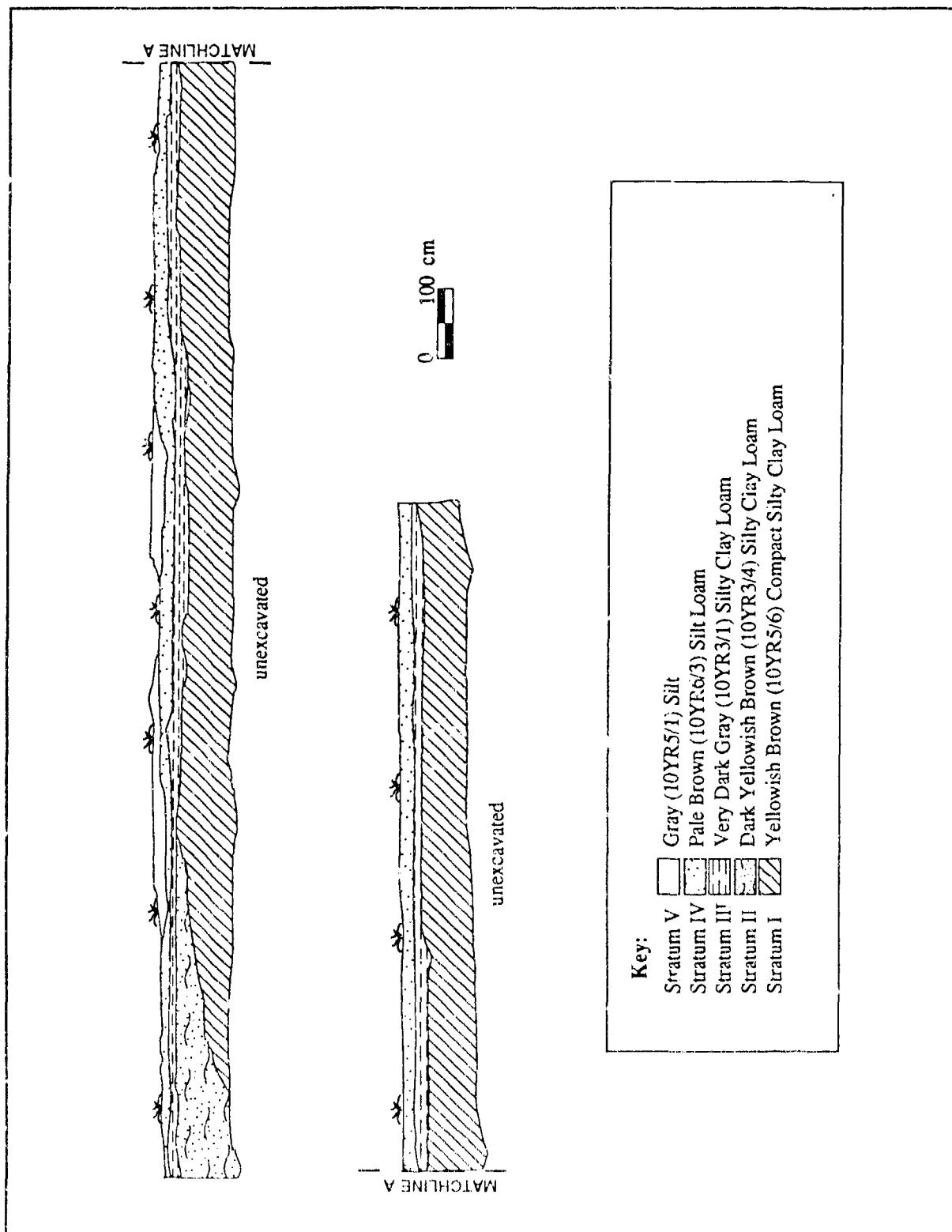


Figure 8-25. Stratigraphic profile of BHT 3 at site 41HP159, facing west.

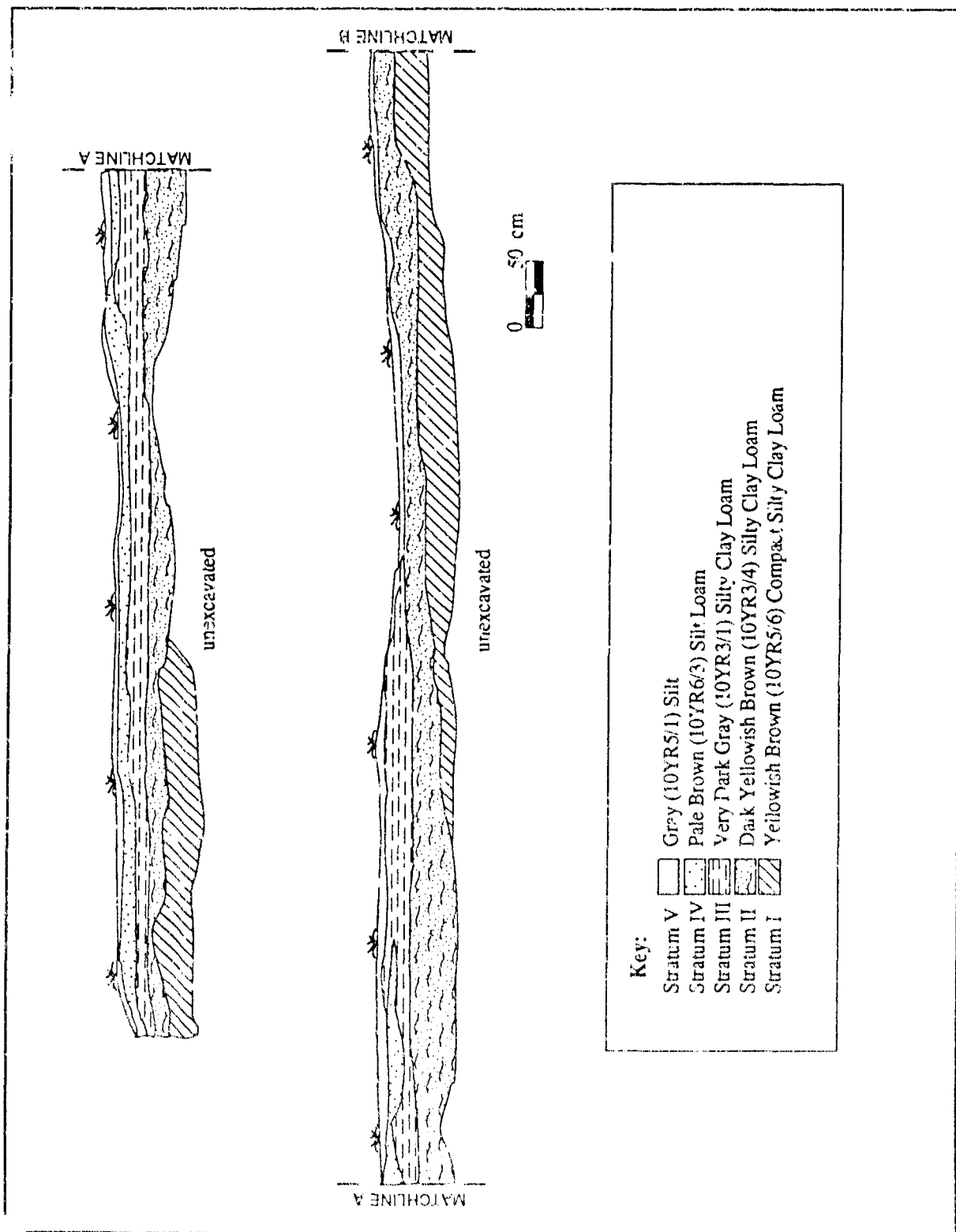


Figure 8-26. Stratigraphic profile of ELLT 4 at site 41HP159, facing east.

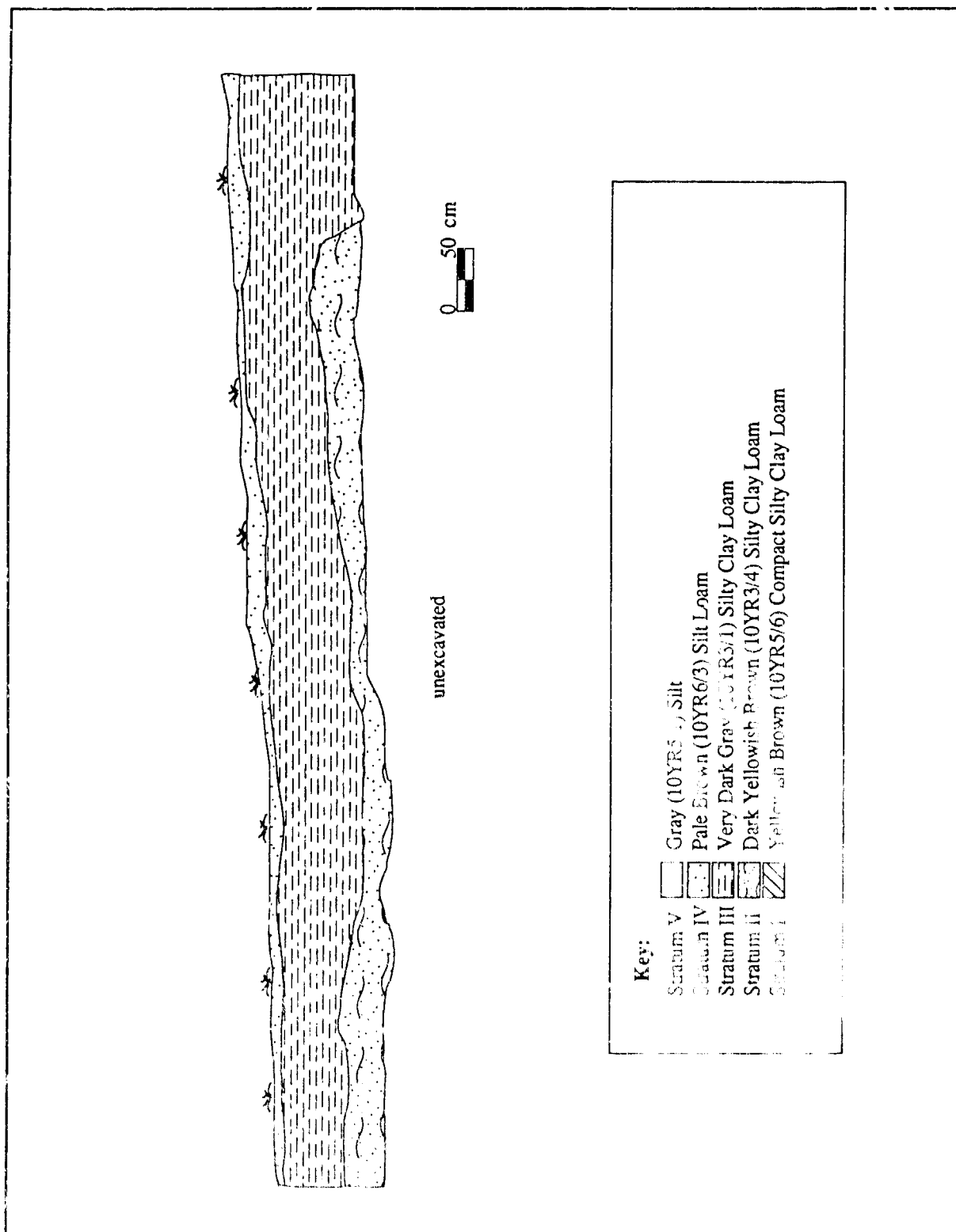


Figure 8-27. Stratigraphic profile of BHT 5 at site 41HP159, facing northwest.

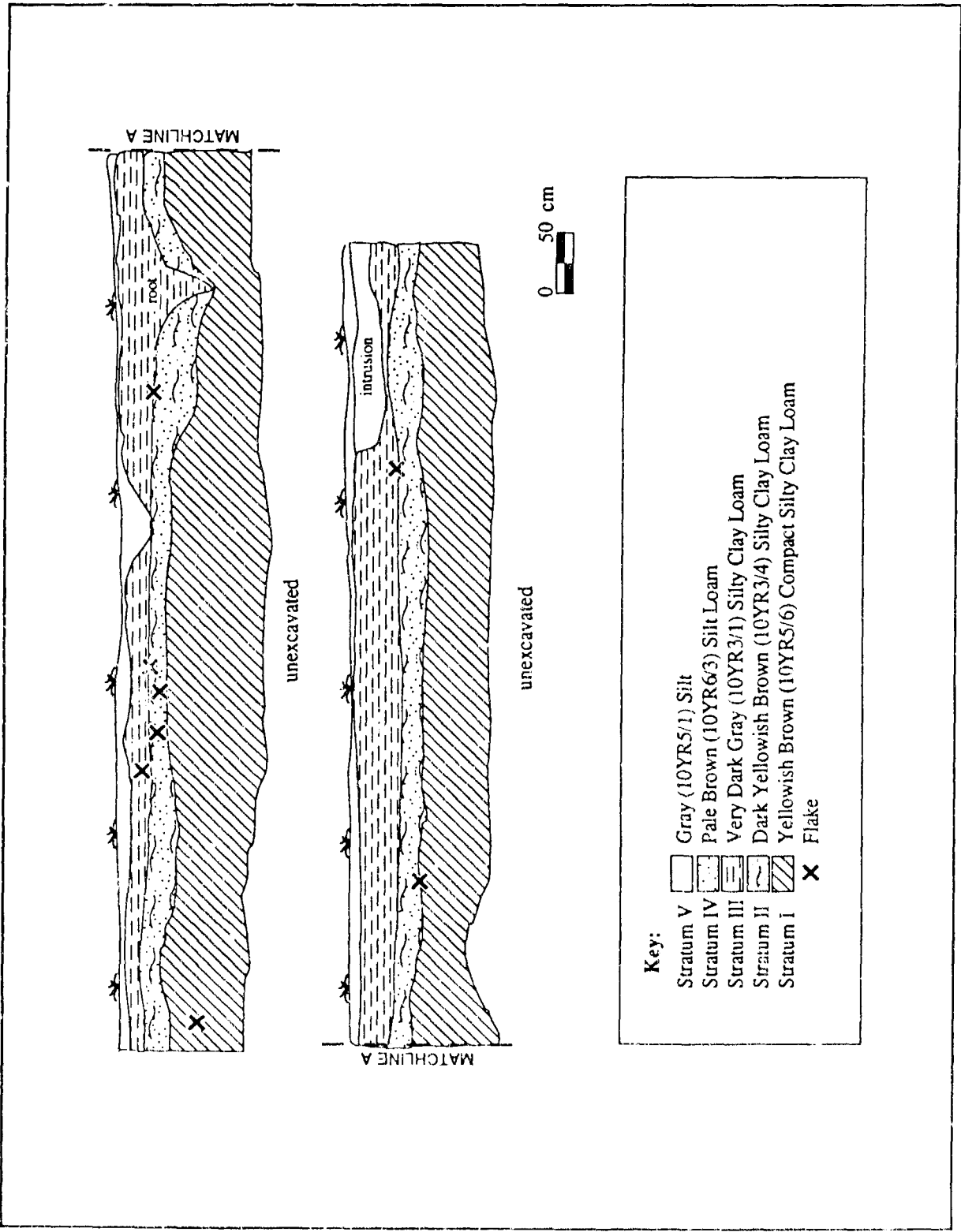


Figure 8-27. Stratigraphic profile of BHT 5 at site 41HP159, facing northwest.

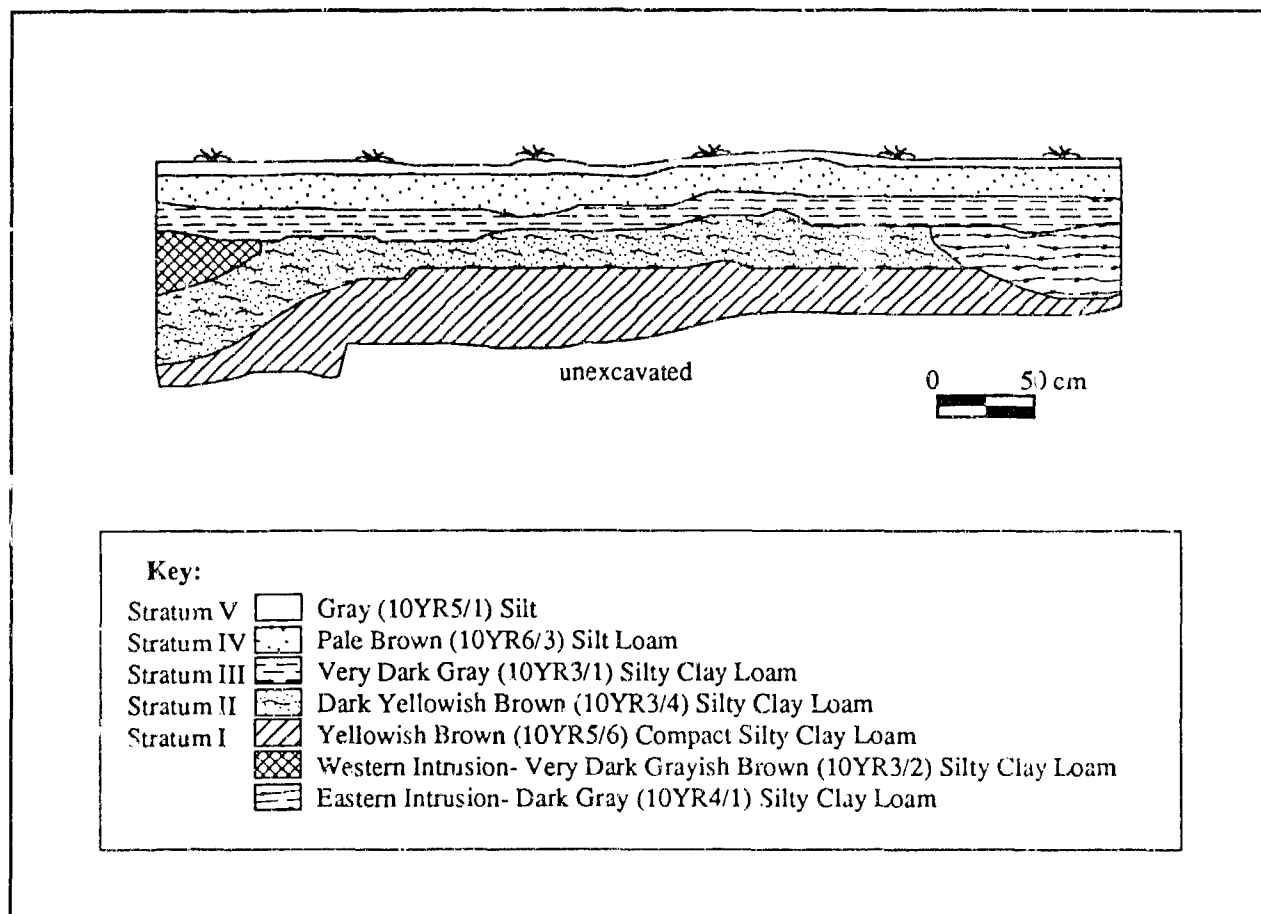


Figure 8-29. Stratigraphic profile of central trackhoe trench at site 41HP159, east of Feature 1, facing north.

The site's overall geomorphological setting is fairly complex, with horizontal and vertical variability. The paleosol may be an east-west-trending, infilled ancient slough or channel feature, aligned somewhat with the original east-west backhoe trench and Feature 1. Feature 2 is located immediately to the south, outside of this dark zone.

Archaeological Investigations

The fieldwork at site 41HP159 began under the terms of Delivery Order Number 6 (see discussion below), when the artificial channel of Finley Branch had to be archaeologically cleared to a depth of 7 m for ca. 1.6 km (1 mi). This project area was the proposed intake channel for the North Texas Municipal Water District Intake Facility. The archaeological investigations along

Finley Branch were performed with the combined use of a trackhoe and backhoe to excavate 7 m deep cuts along the artificial channel and original course of Finley. Trenches measuring 1-1.5 m deep were then excavated across the Finley Branch alluvial fan and the South Sulphur River floodplain. Also, a large, deep block excavation was conducted adjacent to site 41HP160 to determine if low-density deposits were present. Two sites, 41HP159 and 41HP175, were discovered through the use of this deep discovery strategy (Jurney and Bohlin 1993).

The scope of work for Delivery Order Number 7 was developed in consultation with staff of the Texas Historical Commission (SHPO). The scope requested additional backhoe trenches and hand excavations adjacent to Feature 1 in order to define the limits of 41HP159. The results of this continued testing program are presented below.

The straightened channel of Finley Branch is thought to be the result of a rapidly eroded drainage ditch constructed prior to 1925. In 1987, Dr. Reid Ferring (Institute of Applied Sciences, University of North Texas) first noted prehistoric ceramic sherds in the overbank area near 41HP159 and in the stream bed of the artificial Finley Channel. In April 1989, under Delivery Order Number 6, researchers from the Archaeology Research Program of the Institute for the Study of Earth and Man at Southern Methodist University (SMU) discovered a prehistoric hearth ca. 1.3 m below ground surface during excavation of an east-west oriented backhoe trench which extended from the east bank of the modern Finley Branch 75 m east to the former channel (see Figure 8-22). This hearth, designated as Feature 1, was exposed in both the north and south profiles of the trench; its dimensions were 1 m in diameter and 15 cm in maximum thickness. The trench continued eastward, but no additional cultural materials were discovered. Further excavations at the site were accomplished after profiling the trench wall. No cultural materials were discovered stratigraphically higher at this site. However, some fire-cracked rock, flakes, and cores were also noted along the eroded surface of the artificial channel's bank. This area was examined by Mandel (1993).

Feature 1, the hearth, was located 1.3 m below the modern ground surface. Controlled hand excavation was performed in a 1 m x 2 m area over the hearth, completely removing Feature 1. Feature 1 came to be seen as a cluster of burned stone with no associated artifacts. Charcoal from the hearth has been radiocarbon dated at 3626 ± 114 B.C. (dendrocalibrated, SMU-2222). This is the single earliest radiocarbon date based on wood charcoal for the Cooper Lake project area currently recorded. The pebble- and cobble-sized stones associated with the hearth appear to derive from the abundant Ogallala gravel deposits on the nearby uplands.

In July 1989, following consultation with the State Historic Preservation Officer (SHPO), the Corps decided to further evaluate the site by requesting SMU to place a perpendicular (i.e., north-south) backhoe trench in the area and to conduct controlled excavations in two 1 m x 1 m units to investigate any newly found cultural materials (or, if no cultural materials were present,

to place controlled excavations randomly). This additional fieldwork took place between September 25 and October 9, 1989, and was conducted under Delivery Order Number 7.

Additional north-south-trending backhoe trenches were emplaced north and south of the earlier east-west trench. The trenches averaged ca. 1.5 m in depth. About 7 m south of the earlier recorded hearth, another burned rock feature (Feature 2) was revealed at ca. 65 cm below surface (estimated depth from adjacent surface). This feature was shallower than Feature 1, which originated at 1.3 m below surface. A 1 m x 1 m excavation unit was placed over Feature 2 (see Figure 8-22). No charcoal was present in the excavated portion of this feature, and as before, no cultural materials other than fire-cracked rock were identified in association. Approximately 8 m northeast of Feature 1, a second 1 m x 1 m unit (Unit 4) was excavated in a place where chipped stone debris and burned rock appeared in a backhoe trench profile. This unit was taken to a depth of ca. 1.6 m below surface, and yielded cores, specialized implements, bifaces, points, and flakes.

A total of 595 artifacts were recovered from backhoe trenches and test units excavated at 41HP159 under Delivery Order Number 7. This total includes 359 flaked stone artifacts (60.3% of all artifacts from the site), all of which were analyzed in 1991-1992 following the analytical procedures outlined in Chapter 5 (Table 8-6). Selected artifacts from the assemblage are shown in Figures 8-30 and 8-31.

All of the flaked stone artifacts in the assemblage are of the locally available Ogallala "quartzite." In hand-specimen this raw material shows considerable variation in color and apparent grain size. The fine-grained Ogallala specimens show the greatest variability in color, and include plain and mottled varieties of red, brown, gray, orange, and pink in hues 5R, 10R, 5YR, 10YR, and 5Y as shown on the Munsell Rock-Color Chart. The medium-grained specimens are similar to the fine-grained specimens, showing red, brown, gray pink varieties in hues 5R, 10R, 5YR, and 10YR. The coarse-grained specimens are predominately brown and gray (hue 5YR). Several pieces of coarse-grained nondiagnostic shatter are classified as dusky blue (5PB3/2). This latter

variety of the Ogallala material probably was not used in aboriginal flaked stone manufacture.

Although the term "quartzite" is used to describe this material, petrographic analysis of the flaked stone artifacts recovered from site 41HP159 and five other flaked stone assemblages analyzed in 1991-1992 (i.e., 41HP76, 41DT21, 41DT177, 41DT162, and 41DT247) indicate a slightly

different raw material composition. Silt-sized (62-4 μm) quartz grains dominate in most samples, with some samples containing abundant grains ranging from sand-sized (62 μm) to medium sand (250-500 μm) and larger. The samples appear to be polymodal with no one grain size dominating. The abundance of fine silt-sized (8-16 μm) quartz between the large silt- and sand-sized fragments in the matrix of this raw

TABLE 8-6

Distribution of Flaked Stone Artifacts from 41HP159, Delivery Order Number 7 Study Area, by Excavation Unit, Arbitrary Level, Raw Material Type, and Artifact Technotype

Excavation Unit	Feature	Level	Cores and Core Fragments	Primary Core Trimming Flakes	Secondary Core Trimming Flakes	Tertiary Core Trimming Flakes	Bifaces and Biface Fragments	Primary Biface Thinning Flakes	Secondary Biface Thinning Flakes	Tertiary Biface Thinning Flakes	Projectile Points/Point Fragments	Specialized Implements	Non-Diagnostic Shatter	Total
BHT 2	—	0-100 cm	—	1	1	—	—	1	3	1	—	—	2	9
BHT 4	—	Backdirt	—	—	—	—	—	1	—	—	—	—	—	1
BHT 6	—	25-108 cm	—	4	—	—	—	2	6	—	—	—	2	14
BHT 7	I	—	—	—	—	—	—	1	—	—	—	—	1	2
BHT 8	—	135 cm	—	—	—	—	—	—	1	—	—	—	1	2
Unit 3	II	58 cm	—	—	—	—	—	—	1	—	—	—	—	1
		70-80 cm	—	1	1	—	—	3	5	—	—	—	2	12
Unit 4	—	0-30 cm	—	1	—	—	—	—	—	—	—	—	1	2
	—	30-50 cm	2 ^a	29	16	2	4 ^b	25	15	3	—	—	10	106
	—	50-60 cm	—	7	3	—	1 ^c	16	22	6	1 ^d	—	18	74
	—	60-70 cm	—	18	3	—	—	11	12	3	—	—	16	63
	—	70-80 cm	—	5	4	—	1 ^e	11	10	5	1 ^f	1 ^g	2	40
	—	80-90 cm	—	2	1	—	2 ^h	1	3	—	—	—	1	10
	—	90-100 cm	—	3	—	—	—	3	1	—	—	—	3	11
	—	100-110 cm	—	2	—	—	—	1	2	1	—	—	—	6
	—	110-120 cm	—	—	—	—	—	—	1	—	—	—	—	1
	—	120-130 cm	—	—	—	—	—	2	—	—	—	—	—	2
	—	150-160 cm	—	—	—	—	—	—	—	—	—	—	1	1
General Collection	—	Surface	—	—	—	—	—	2	—	—	—	—	—	2

TABLE 8-6 (cont.)

Excavation Unit	Feature	Level	Cores and Core Fragments	Primary Core Trimming Flakes	Secondary Core Trimming Flakes	Tertiary Core Trimming Flakes	Bifaces and Biface Fragments	Primary Biface Thinning Flakes	Secondary Biface Thinning Flakes	Tertiary Biface Thinning Flakes	Projectile Points/Point Fragments	Specialized Implements	Non-Diagnostic Shatter	Total
SUBTOTAL: RAW MATERIALS														
Fine-grained Ogallala Quartzite		N	1	59	13	1	6	57	63	15	2	1	36	254
		%	0.4	23.2	5.1	0.4	2.4	22.4	24.8	5.9	0.8	0.4	14.2	100.0
Medium-grained Ogallala Quartzite		N	—	5	10	1	2	19	16	6	—	—	15	74
		%	—	6.8	13.5	1.4	2.7	25.7	21.6	8.1	0.0	0.0	20.3	100.0
Coarse-grained Ogallala Quartzite		N	1	9	6	—	—	3	2	—	—	—	10	31
		%	3.2	29.0	19.4	—	—	9.7	6.5	—	—	—	32.3	100.0
TOTAL			2	73	29	2	8	79	81	21	2	1	61	359
PERCENT OF TOTAL			0.6	20.3	8.1	0.6	2.2	22.0	22.6	5.8	0.6	0.3	17.0	100.0

a one embryonic core, and one secondary-reduced core fragment

b three secondary-thinned biface and biface fragments, and one tertiary-thinned biface fragment

c one tertiary-thinned biface fragment

d one Kent Projectile Point fragment

e one secondary-thinned biface fragment

f one Yarbrough Projectile Point fragment

g one bilateral-unifacially modified primary core trimming flake

h one initial-edged biface fragment, and one secondary-thinned biface fragment

NOTE: Three formed tools and 33 pieces of debitage show utilization. Eight pieces of debitage have been thermally altered.

material render the terms polycrystalline quartz, or even quartzite, not quite appropriate. The Cooper Lake Ogallala material might rather be called a silty chert following the terminology of Pettijohn, Potter, and Siever (1987).

The mottled appearance of most of the material (especially the fine-grained variety) is caused by finely divided iron oxide particles (2 μ m or smaller) which coat the quartz grains, giving the colored flint an appearance of being fine-grained than is actually the case. Thin-section samples viewed at 250X show grains intersected by the cutting as clear, while the interstitial grains are partly obscured by a fine cloud of iron oxide

particles. Hematite or limonite are the probable identities of the iron oxide minerals in this material (Raymond Buyce, personal communication 1992).

The second most dominant class of artifacts recovered from the site under Delivery Order Number 7 is fire-cracked rock ($n=231$; 38.8%). Thirteen (5.6%) of these specimens were more-or-less evenly distributed between BHTs 1, 2, and 6 at depths ranging 0-170 cm below ground surface. Feature 1 yielded 67 (29%) pieces of fire-cracked rock from BHT 7 ($n=4$; 1.7%), Unit 1 ($n=48$; 20.8%), and Unit 2 ($n=15$; 6.5%). Feature 2 yielded 34 (14.7%) pieces of fire-cracked rock

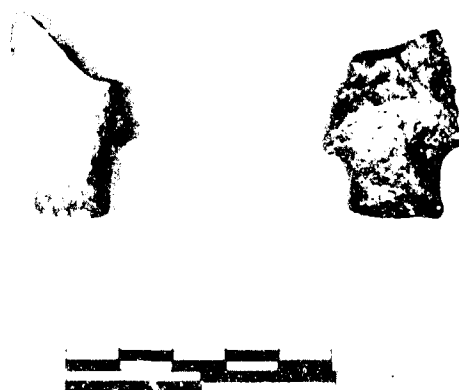


Figure 8-30. Projectile points from site 41HP159, Delivery Order Number 7 study area (left-right): Kent dart point (Unit 4, 50-60 cm) and Yarbrough dart point (Unit 4, 70-80 cm).

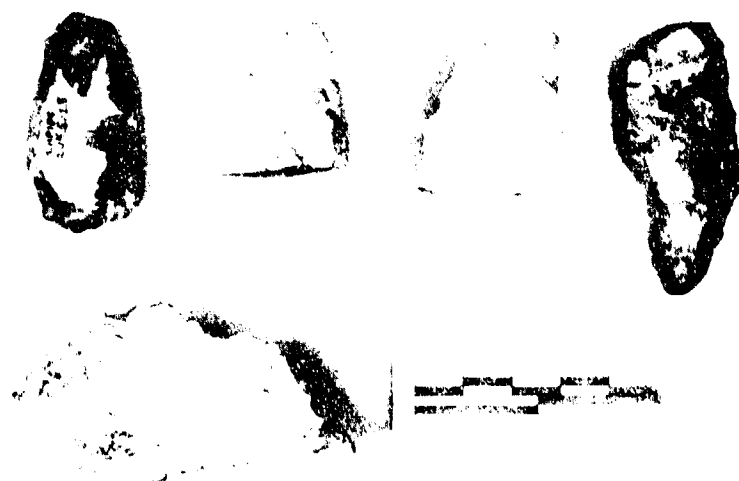


Figure 8-31. Flaked stone artifacts from site 41HP159, Delivery Order Number 7 study area. Top row (left-right): specialized implement (Unit 4, 70-80 cm), tertiary thinned biface fragment (Unit 4, 30-50 cm), secondary-thinned biface fragment (Unit 4, 30-50 cm), secondary thinned biface fragment (Unit 4, 30-50 cm). Bottom row (left-right): secondary-thinned biface fragment (Unit 4, 70-80 cm).

from Unit 3, with 16 (47.1% of the unit total) of those specimens deriving 80-90 cm below ground surface.

Most of the fire-cracked rock specimens ($n=117$; 50.6%) in the assemblage were recovered from Unit 4, where no cultural features were identified in the field. The vast majority ($n=73$; 62.4%) of the Unit 4 specimens were recovered 60-90 cm below ground surface. The 60-70 cm level yielded 31 (26.5% of the unit total) specimens, the 70-80 cm level yielded 25 (21.4%) specimens, and the 80-90 cm level yielded 17 (14.5%) specimens. The flaked stone artifacts from these same levels accounted for 35.8% ($n=113$) of the total number of flaked stone artifacts from Unit 4, and included the Yarbrough point from the site (see Table 8-6).

Two bone fragments, three pieces of thermally altered earth, and small amounts of shell have been recovered from the site. The poor preservation of these materials may have bearing on determining the possible function of the two hearths. The hearths' role at this site may be related to the presence of the nearby Ogallala lithic resources and possibly connected to stone tool production. Feature 1 contains charcoal, while Feature 2, as presently exposed, contains no charcoal. The sediments at this site appear to have accumulated gradually, with these features possibly exposed for relatively long periods of time (Rolfe Mandel, personal communication 1989), thereby removing the charcoal. No evidence of earlier or later prehistoric occupations has been documented. Ferring did note ceramic sherds along the banks of Finley Branch in this area, although this material might have been in a secondary context (i.e., post-settlement overbank deposition).

Site 41HP159 is a multi-component site with some degree of stratification, as evidenced by the vertical distribution and isolation of the two hearths and the dart points. The Kent dart point and other lithic debris retrieved ca. 60-70 cm within Level 2 may be associated with the occupational horizon of Feature 2. The radiocarbon date of 3626 ± 114 B.C. (SMU-2222) from Feature 1 describes to the Middle Archaic period.

This period, in terms of specific data and demonstrated functional explanations, is poorly understood at Cooper and in northeastern Texas.

Only 300-400 m (984-1,312 ft) north of 41HP159, another buried site with Late Prehistoric pottery, 41HP175, is situated in the same general alluvial setting. Concerning earlier evidence, local relic collectors indicate that Finley Branch has a reputation for revealing San Patrice, Golondrina, or similar early forms of dart points in its gravel bed. In October 1989, after the testing efforts, SMU archaeologists noted a trace of burned rock in the eroding profile deep in the original east-west backhoe trench, below Feature 1 and closer to the artificial channel of Finley Branch. The site's vertical and horizontal limits remain difficult to mark precisely, despite extensive trenching and hand excavations.

No substantial cultural materials other than fire-cracked rock appear far from the immediate area of the unit with the Kent and Yarbrough dart points. There is a possibility that a small amount of widely scattered cultural material continues east to the original channel of Finley Branch, north towards 41HP175 and west across the artificial channel; however, the excavation of additional backhoe trenches did not indicate this. At site 41HP160, a minimal amount of prehistoric material was seen between 35-80 cm below ground surface in a backhoe trench and in eroded cattle trails (Jurney and Bohlin 1993: 8-24). This material consisted of fire-cracked rock, flakes, cores, and a dart preform. The dart preform was recovered 65 cm below ground surface. The site is located ca. 200-250 m (656-820 ft) northwest of site 41HP159.

Recommendations

Site 41HP159 is eligible for National Register of Historic Places status (Category D) under Criterion D (36CFR60). The geomorphological aspects of this site require more extensive investigation. Additional mitigative investigation have been conducted by Prewitt and Associates, Inc., under Corps of Engineers Contract DACW63-90-D-0008.

Site 41HP179

This prehistoric site (see Figure 8-15) consists of a single prehistoric pottery sherd discovered during backhoe investigations along the channel of Merrit Creek. This artifact was recovered from 90 cm below ground surface. The site is located in the floodplain of Merrit Creek at 134 m (440 ft) above msl. The soil type is a Natche clay loam, and the native vegetation was hardwood forest. Today the area is in pasture.

Stratigraphy

Three natural strata were identified at site 41HP179 (Figure 8-32), which was discovered

in Backhoe Trench 23 (see Chapter 6, this volume). These strata are discussed in order from oldest (lowest) to youngest (uppermost).

Stratum I is a very dark gray (10YR3/1) silty clay. It has a distinct upper boundary at 2 m below surface, and was excavated to 2.3 m below surface. It is culturally sterile.

Stratum II is a very dark gray (7.5YR3/0) clay. It has an abrupt upper boundary at 80 cm below surface. A single artifact, a red-filmed pottery sherd, was recovered from this stratum.

Stratum III, the surface soil horizon, probably formed from post-historic settlement alluvium. It is a brown (10YR5/3) silt loam which is 80 cm thick. Stratum III was culturally sterile in all tested portions of the site.

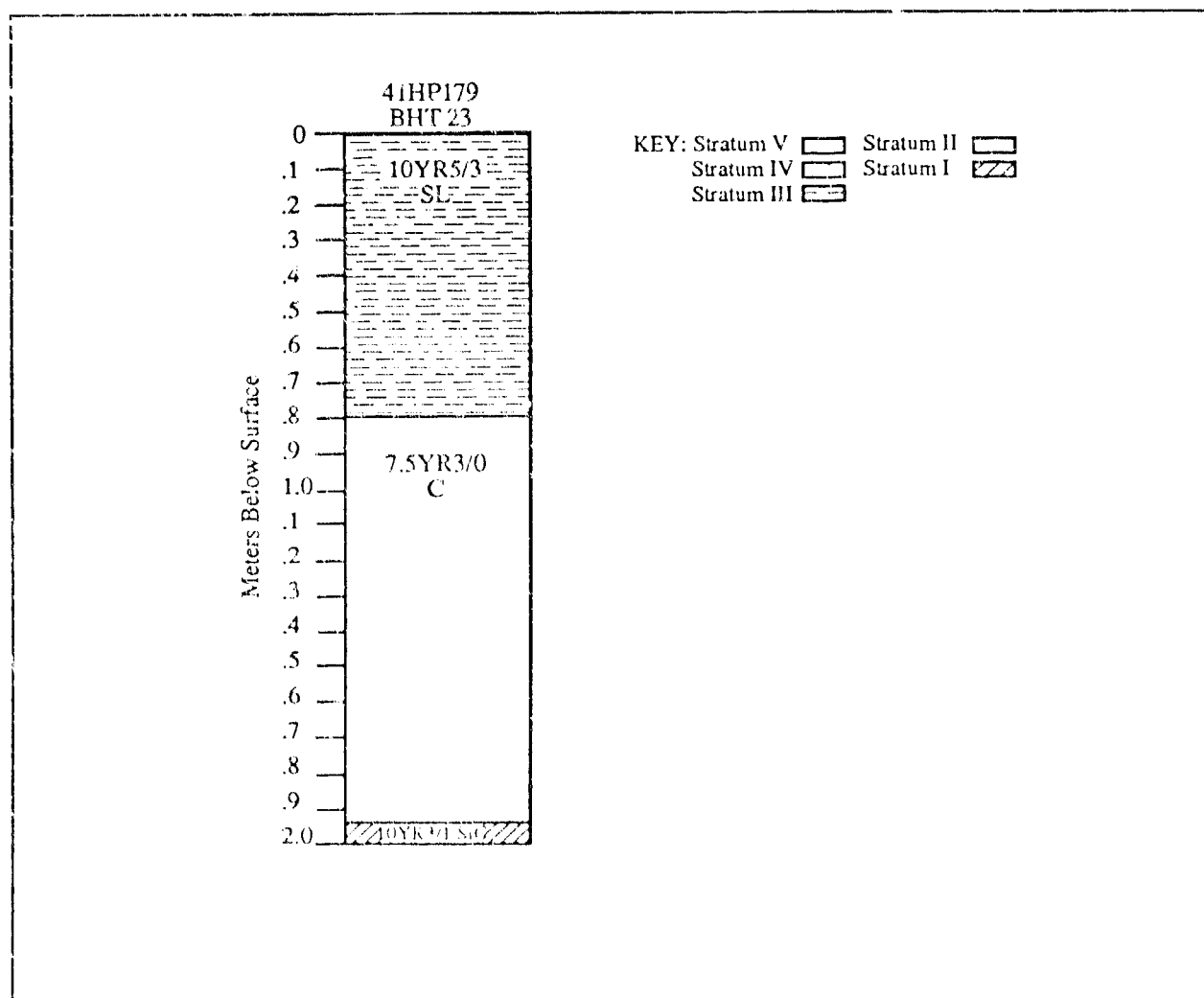


Figure 8-32. Stratigraphic profile of BHT 23 at site 41HP179.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, photography, mechanical and hand excavation, and the screening (0.25 inch mesh) of sediments. Nine shovel tests (25 cm x 25 cm x 30 cm) were excavated to 100 cm below ground surface along the walls of Backhoe Trench 23, but all were sterile. A permanent datum was placed 5 m east of BHT 23.

Recommendations

Due to the lack of any other artifacts, site 41HP179 does not appear to have the potential to contain significant information relevant to the Research Design. The single artifact appears to be redeposited. The site is deemed not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the site.

Site 41HP180

This prehistoric site (Figure 8-33) is located in a pasture on the Merritt Creek floodplain. Intermittent drainages lie 29 m (95 ft) south and 125 m (410 ft) to the west. Merritt Creek runs 750 m (2,460 ft) to the west and 1.6 km (1.0 mi) north. Portions of these drainages appear to have been channelized. The South Sulphur River is 3 km (1.9 mi) to the north.

The site is 350 m (1,148 ft) south-southwest of site 41HP75 and 500 m (1,640 ft) northeast of site 41HP119. Elevation of the site is 135.6 m (445 ft) above msl, and the mapped soil type is Kaufman clay. In its native state, the site was in floodplain forest consisting of mixed hardwoods.

Stratigraphy

Three natural strata were identified at site 41HP180 (Figure 8-34). These are discussed from oldest (lowest) to youngest (uppermost).

Stratum I is a gray (10YR6/1) clay loam with strong brown (7.5YR5/8) mottles. Calcium carbonate concretions are common. It has a distinct upper boundary at 60 cm and was excavated to 2.2 m below ground surface. It is culturally sterile.

Stratum II is a dark gray (10YR4/1) silty clay with very dark gray (10YR4/1) to brown (10YR5/3) mottles. It has a diffuse upper boundary at 40 cm. It is culturally sterile.

Stratum III is the surface soil horizon. It is a dark gray (10YR4/1) loam. Three fire-cracked rocks were noted in the trench profile, two at 25 cm below surface and one at 17 cm below surface. Flakes, mussel shell, and bone were collected from the backdirt in this stratum.

Archaeological Investigations

Fieldwork conducted under Delivery Order Number 7 included pedestrian survey, backhoe excavations (unscreened), and hand excavations (screened). During backhoe trenching, cultural materials consisting of lithic debitage were recovered from BHT 26 (see Figure 8-34). Inspection of the trench wall profile revealed fire-cracked rock at 17-25 cm below surface. A surface lithic scatter was observed in a 5 m x 10 m area adjacent to this backhoe trench. Hand excavation of 21 shovel tests recovered additional cultural materials (Table 8-7; Figure 8-35), confined primarily to the Ap horizon. These artifacts include four sherds, one dart point, five bifaces, five edge-modified flakes, bone, fire-cracked rock, and shell.

A shovel test (N90F90) placed near the stream contained artifacts to a depth of 63 cm. The depth of materials in this latter unit may be a result of modern grading and the dumping of fill (both associated with the drainage ditch and levee construction) on the western edge of the site.

Artifacts recovered from Backhoe Trench 26 consist of 60 fire-cracked rocks, 14 untested cobbles, four tested cobbles, 11 flakes, six core fragments, three bifaces, two large unidentifiable mammal long bone fragments, and two mussel shell fragments.

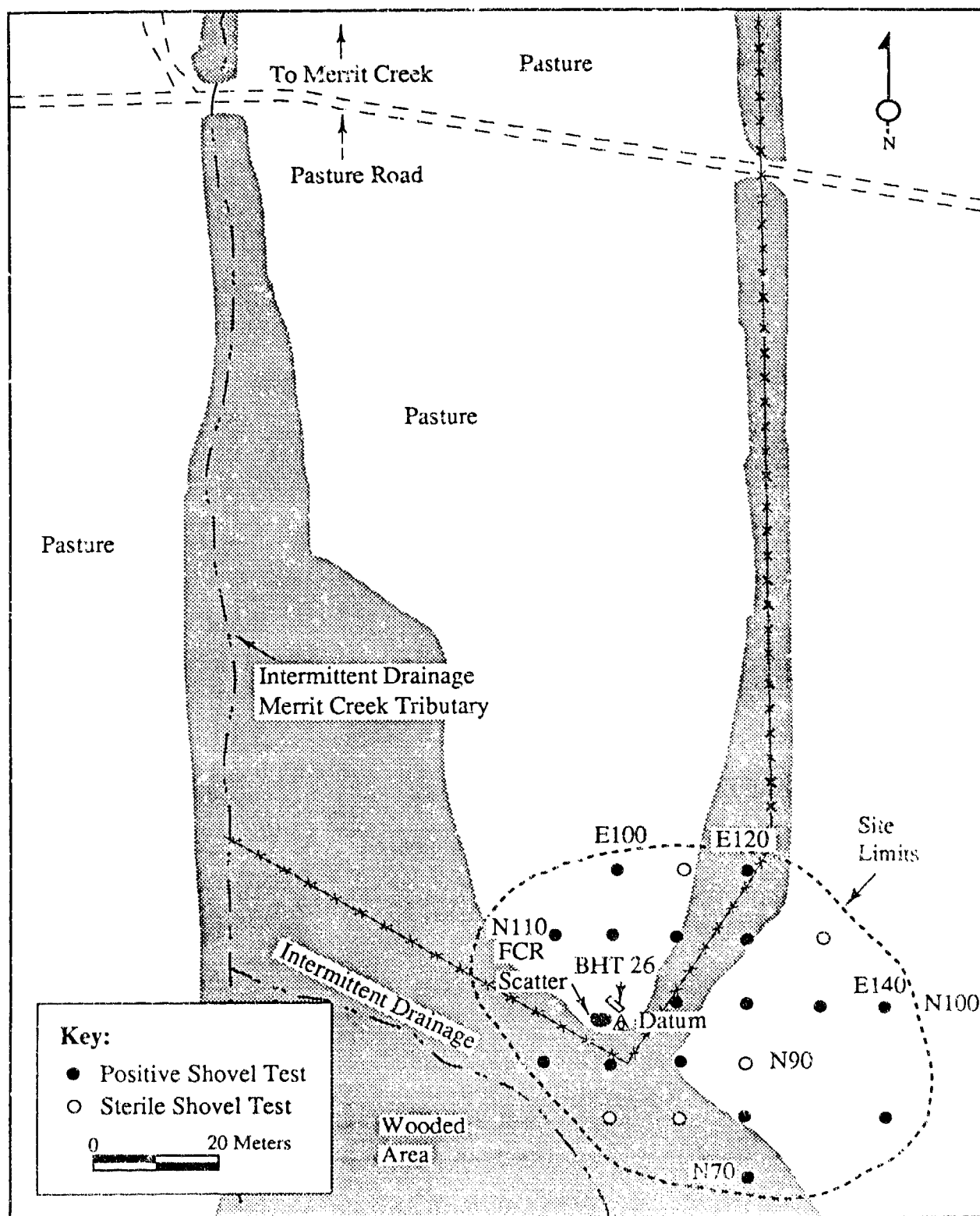


Figure 8-33. Plan of site 41HP180, showing locations of shovel tests, surface scatters, site limits (as defined by surface artifacts and positive shovel tests), and BHT 26.

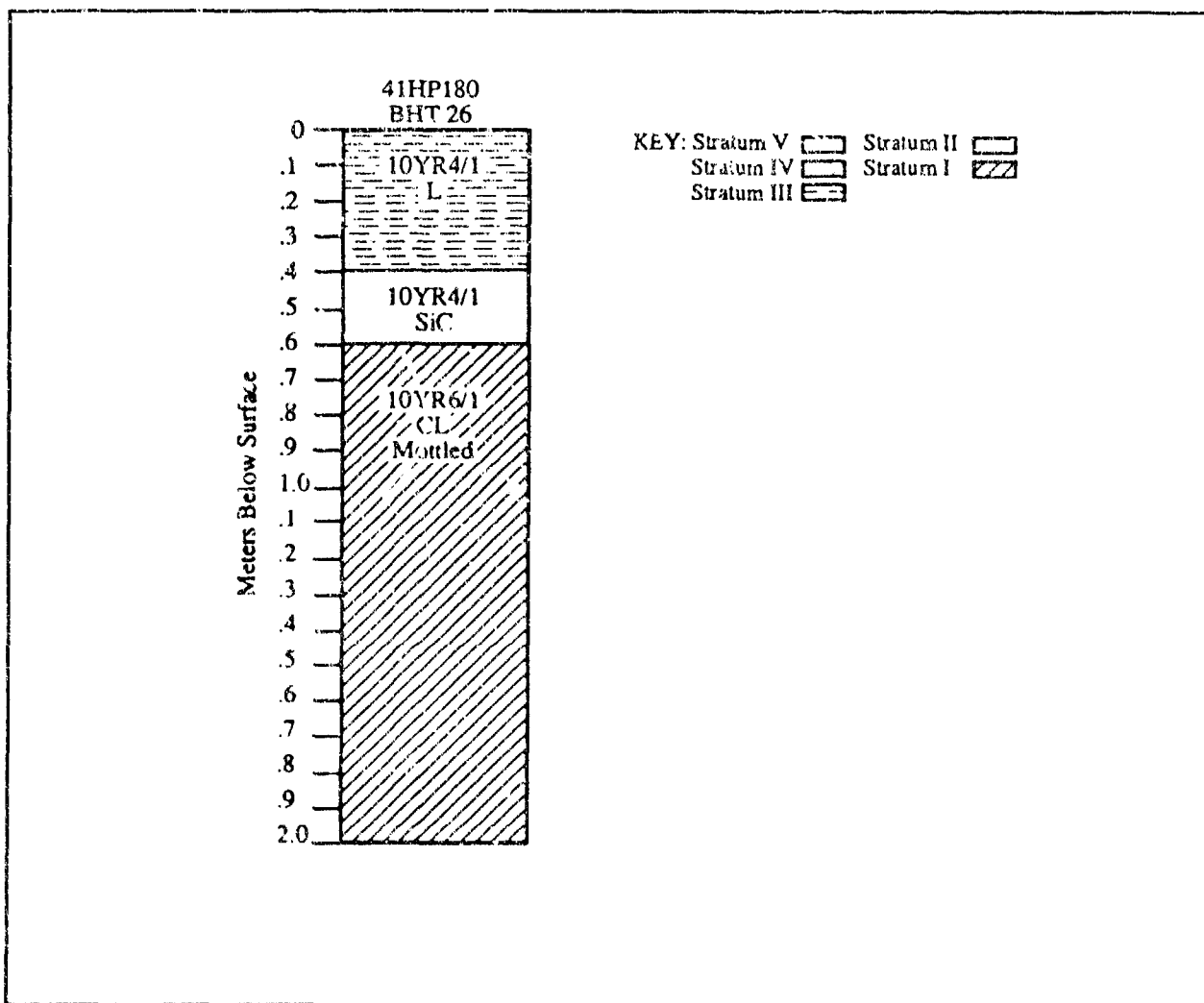


Figure 8-34. Stratigraphic profile of BHT 26 at site 41HP180

Recommendations

The backhoe trench may have encountered the remains of a hearth within the plow zone. Most materials are within the plow zone. Deeper remains are present, but the possibility exists that these were redeposited and buried by levee construction. Site 41HP180 appears to be a Late Prehistoric midden site and could provide information on subsistence strategies and material culture. Also, the presence of fire-cracked rock indicates that hearths and other features may be present, which could aid in radiometric dating of the site. The site is recommended for further work (Category II) in order to fully assess its depositional context and NRHP eligibility.

Site 41HP181

This prehistoric site (Figure 8-36) is located on a north-sloping ridge parallel to and 250 m (820 ft) west of Merrit Creek. Sites 41HP82 and 41HP83 lie on the same ridge, 400 m (1,312 ft) northeast and 400 m (1,312 ft) north of site 41HP181, respectively. The South Sulphur River is 2.75 km (1.7 mi) north of site 41HP181. Elevation of the site ranges from 143-149 m (470-490 ft) above msl, and the mapped soil type is Ellis clay. A dirt road crosses the site, leading towards Merrit Creek. In its native state, this site was located in an upland forest which was dominated by oaks. It has been lumbered and is in second-growth forest and pasture today.

TABLE 8-7

Distribution of Prehistoric Artifacts at Site 41HP180,
Delivery Order Number 7 Study Area

Unit	Depth (cm)	Darts	Bifaces	Util. Flakes	Cores	Flakes	FCR	Bone	Shell	Ceramic	Total
BHT 26	43	—	3	—	6	11	60	2	2	—	84
N70E120	30	—	—	—	—	—	3	—	—	—	3
N80E120	35	1	—	—	—	3	22	—	—	—	26
N80E140	25	—	—	—	—	—	3	—	—	—	3
N90E90	25	—	—	—	2	3	25	—	—	2	32
N90E100	20	—	—	—	—	—	2	—	—	—	2
N90E110	30	—	—	—	—	—	2	—	—	—	3
N100E90	27	—	1	2	—	7	44	3	1	—	58
N100E110	30	—	—	—	—	1	4	—	—	—	5
N100E120	40	—	4	—	2	1	2	—	—	—	9
N100E130	50	—	—	—	—	5	15	—	—	1	21
N100E140	28	—	—	1	2	—	9	—	—	—	12
N110E90	16	—	—	—	—	1	5	—	—	—	6
N110E100	15	—	—	—	—	3	3	1	1	—	8
N110E110	10	—	—	—	—	1	8	—	—	—	9
N110E120	24	—	—	—	2	—	4	—	—	1	7
N120E100	30	—	—	1	—	—	—	—	—	—	1
N120E120	10	—	—	1	—	—	1	—	—	—	2
Total		1	8	5	14	36	213	6	4	4	291

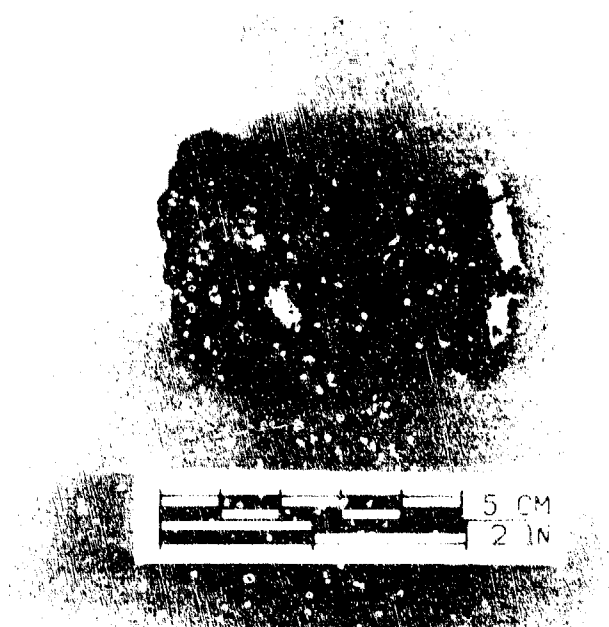


Figure 8-35. Flaked stone artifacts from site 41HP180, Delivery Order Number 7 study area (left-right): biface fragment (BHT 26, 43 cm), Gary dart point (Unit N80E120, 30 cm).

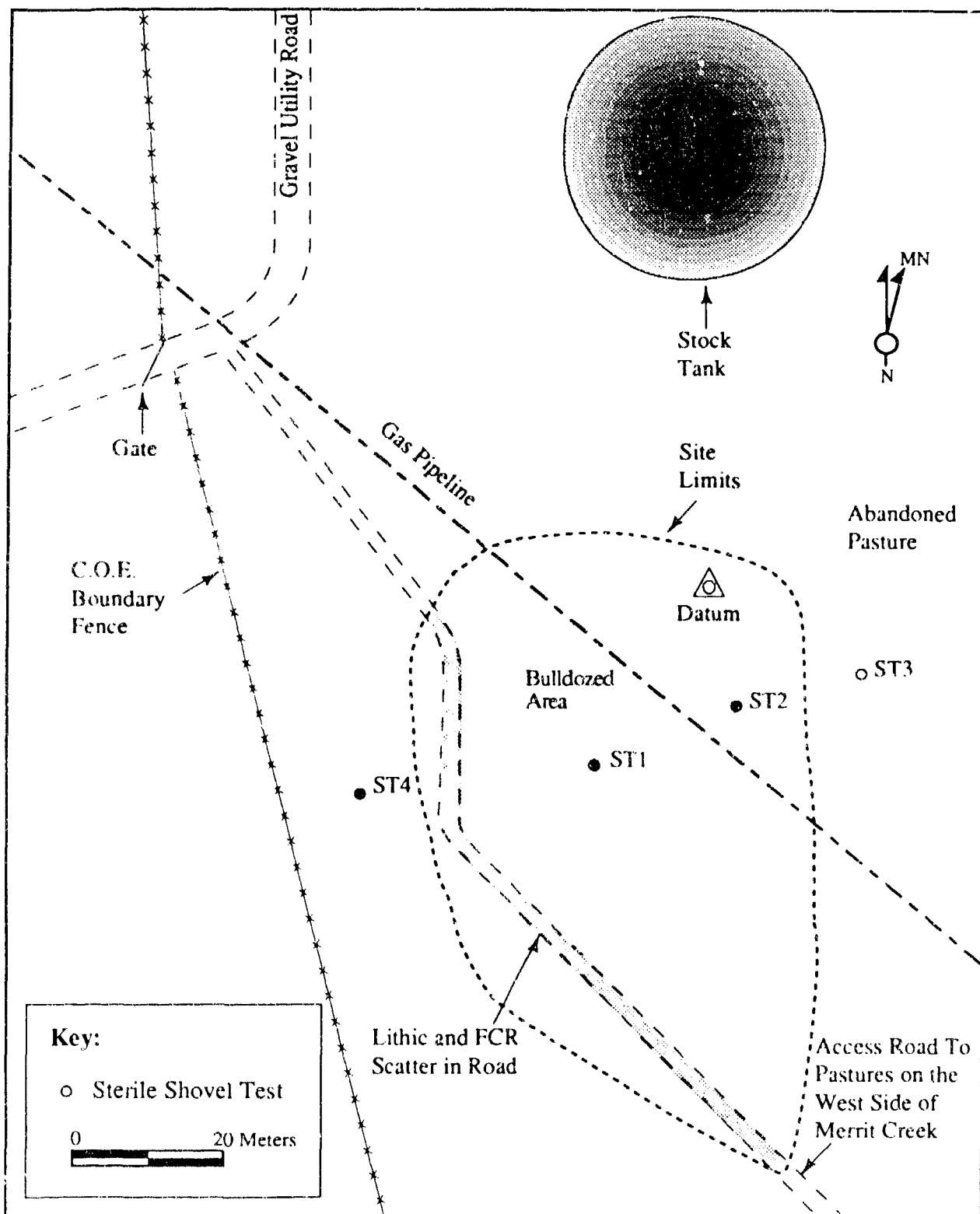


Figure 8-36. Plan of site 41HP181, showing locations of artifact scatter, ground disturbances, and site limits as defined by surface artifacts.

Stratigraphy

Three natural soil strata were identified at site 41HP181, which are discussed in order from oldest (lowest) to youngest (uppermost).

Stratum I is a mottled yellow clay derived from the weathering of the marl bedrock. Pebbles are common throughout this stratum, but it is culturally sterile. Its upper boundary occurs from 18 cm to over 25 cm below ground surface. This stratum is presumed to be continuous across the site, although it was encountered in only two shovel probes (Shovel Test 2 and Shovel Test 3).

Stratum II is a dark brown clay, lower B soil horizon which marks the transition from the subsoil or marl to surficial Stratum III. This stratum also contained pebbles and was culturally sterile.

Stratum III, the surface stratum, ranges in color from medium to dark brown (due to organic enrichment, possibly cattle). It is a clay. The only cultural materials from the site (prehistoric and historic) were recovered from this stratum, which ranges in depth from 8 cm to 10 cm.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, surface collections, shovel testing, and photography. A surface scatter of flakes and fire-cracked rock was noted during pedestrian survey in an unimproved pasture access road. Non-controlled surface collection from erosional gullies around the roadbed over a 60 m long area (see Figure 8-36) yielded four fire-cracked rocks, two flakes, one shattered cobble fragment, and one unidentifiable iron fragment. A subsequent revisitation in March 1991 yielded a single Waco sinker made of Ogallala quartzite which was recovered from vehicular ruts in the roadbed.

The shovel testing program conducted in March 1991 at site 41HP181 consisted of the excavation of four shovel probes, placed at 20-30 m intervals across the site area. This placement was designed to sample both disturbed and relatively undisturbed areas. A single unit (ST 3) was sterile and only one historic glass fragment was recovered from Shovel Test 4. The shovel

probes ranged in size from 35 cm x 35 cm to 50 cm x 50 cm and were excavated to depths of 20-28 cm below ground surface. Single flakes of Ogallala quartzite were recovered from Shovel Tests 1 and 2, Stratum III 0-10 cm.

Recommendations

A gas pipeline parallels the road and has disturbed the central portion of the site and the site has also undergone severe erosion. The single temporal diagnostic from the site, a Waco sinker, dates to the earlier part of the Archaic period (Turner and Hester 1985: 259), but the chronological association of all artifacts is impossible to determine.

If determination of the site assemblage's cultural associations were possible, then site 41HP181 would provide the potential to address the chronological, material culture, and settlement research questions for an as yet poorly understood segment of the prehistory in Cooper Lake. Due to disturbance, low artifact density, and the lack of temporally diagnostic artifacts in suitable contexts, the site is deemed clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility.

Site 41HP182

This prehistoric site (Figure 8-37) is located in lowland pasture at the base of the north slope of a west-trending ridge at an elevation of 125.6 m (445 ft) above msl. The South Sulphur River lies 1.5 km (0.93 mi) north, and Merrit Creek is located 1 km (0.62 mi) east of the site. The mapped soil type is Nahatche clay loam. In its native state, the site was in floodplain forest, but the area has been cleared and is in fallow pasture today.

Stratigraphy

Four natural strata and one possible cultural stratum (Figure 8-38) were defined in BHT 58, which discovered the buried cultural deposits at site 41HP182. These strata are described below from oldest (lowermost) to youngest (uppermost).

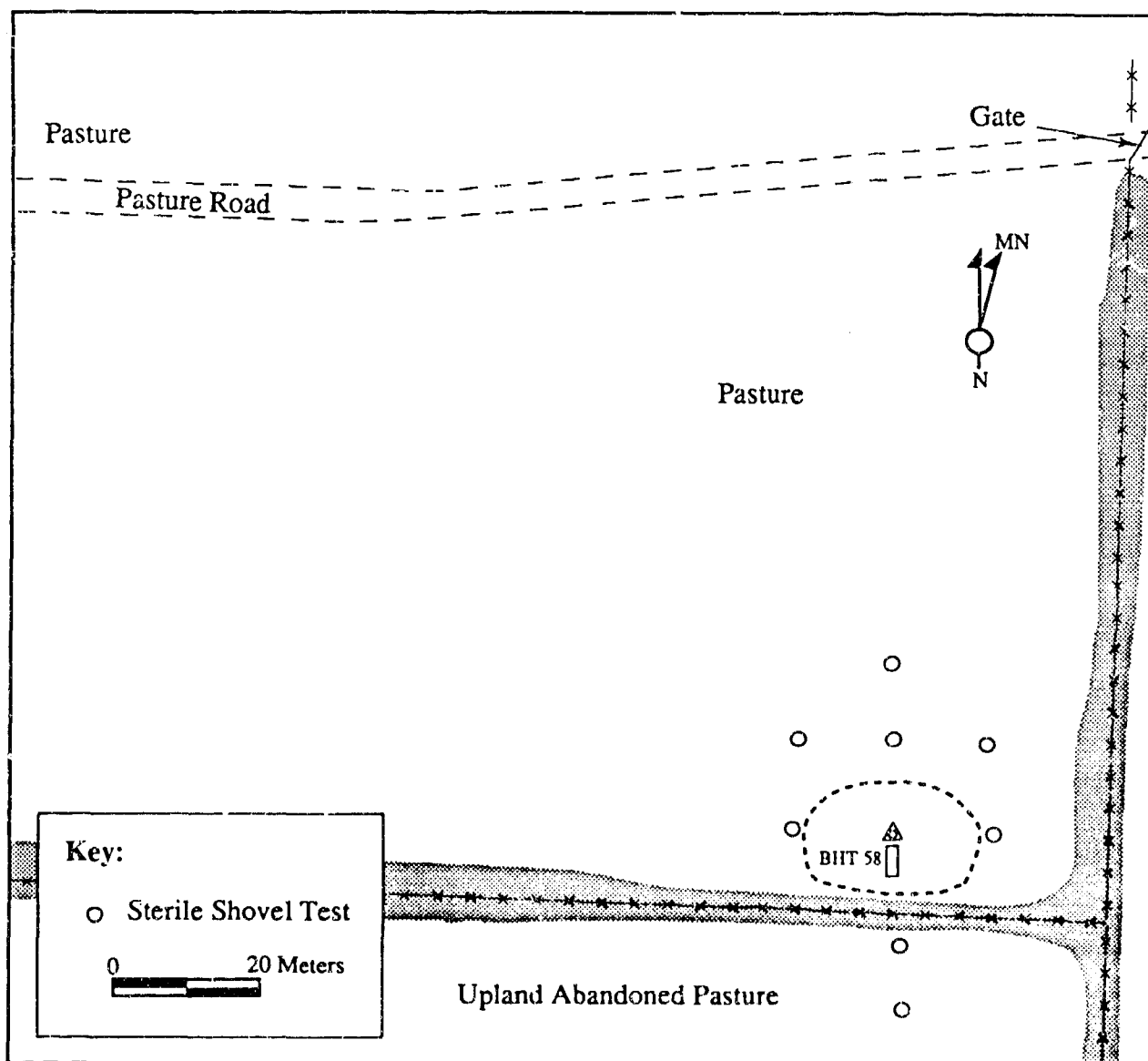


Figure 8-37. Plan of site 41HP182, showing locations of site limits (as defined by surface artifacts), BHT 58, and sterile shovel tests.

Stratum I is a gray (10YR5/1) clay with light olive brown (2.5Y5/4) and strong brown (7.5YR5/8) mottles. It has a diffuse upper boundary at 1.2 m below ground surface. It is culturally sterile.

Stratum II is a very dark grayish brown (10YR3/2) silty clay with very dark gray (10YR3/1) mottles. It has a diffuse upper boundary at 75 cm below ground surface. It is culturally sterile.

Stratum III is a very dark gray (10YR3/1) to very dark grayish brown (10YR4/1) loam. It has

a distinct upper boundary at 45 cm below surface. A flake was recovered from this stratum in BHT 58 at 52 cm below surface.

Stratum IV is a very dark grayish brown (10YR4/1) loam with diffuse charcoal from 40 cm to 45 cm below surface. Two flakes were recovered from this stratum. It has not been determined whether the charcoal was culturally introduced to the Stratum III sediments (either prehistorically or historically), or is derived from historic land clearing and burial of this zone.

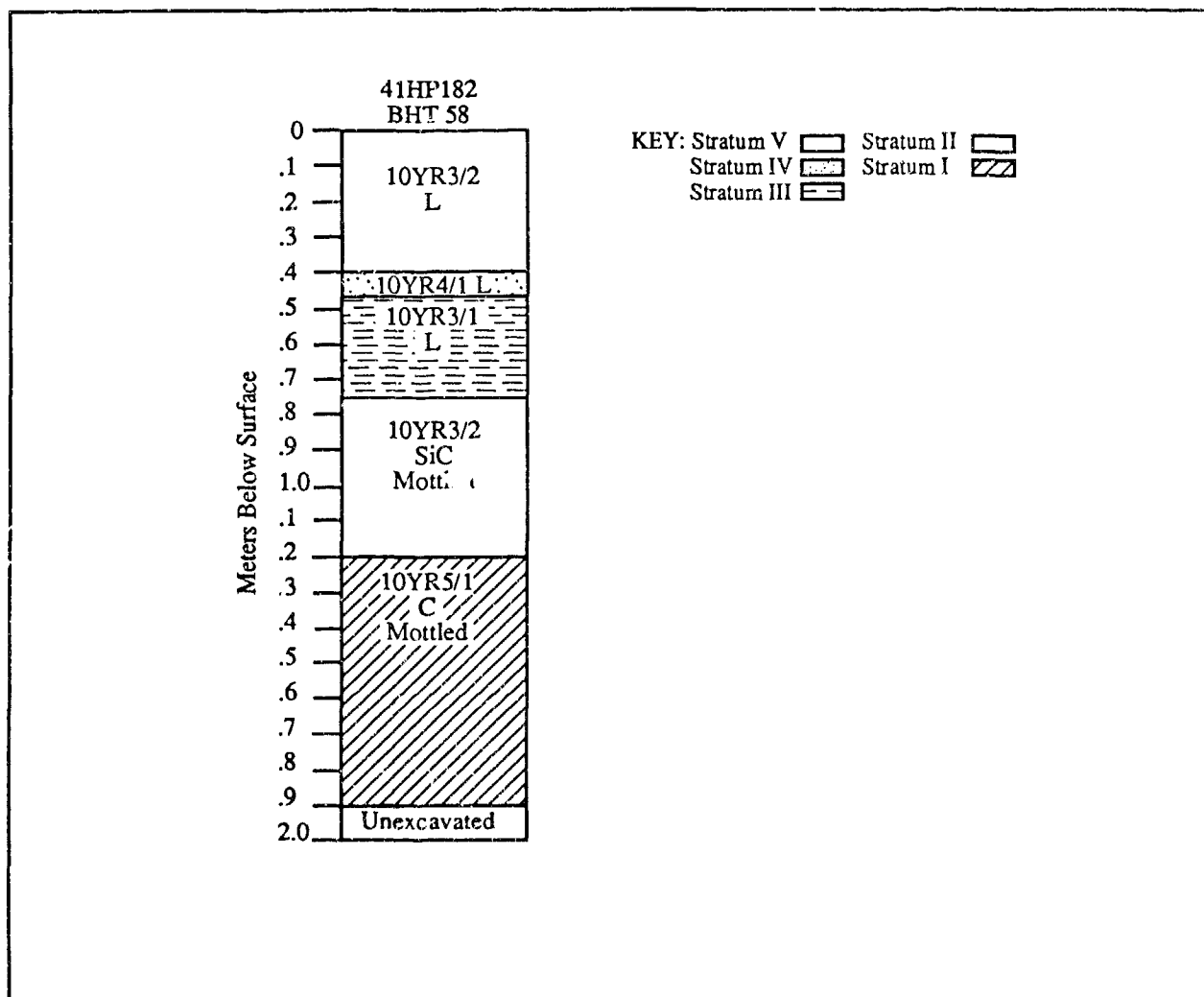


Figure 8-38. Stratigraphic profile of BHT 58 at site 41HP182.

Stratum V is a very dark grayish brown (10YR3/2) loam. This surface horizon may be derived from historic farming or land clearing practices since BHT 58 is located along a fence line. A single core was recovered from this stratum.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. Excavations conducted at the site included a backhoe trench and shovel testing. The site was discovered by BHT 58 (see Figure 8-37). The backhoe trench revealed a charcoal flecked

lens 40-45 cm below surface and a fine-sand lens extending 52-58 cm below ground surface. Two flakes and one tested nodule were recovered from the charcoal lens. No other artifacts were recovered from the backhoe trench. Eight shovel tests (50 cm x 50 cm) were excavated to depths of 50-60 cm, but all were sterile.

Recommendations

Due to the lack of temporally diagnostic artifacts, the time of occupation is unknown. The site is characterized by extremely low density artifacts and may have been redeposited from a higher position on the ridge. The site is deemed ineligible (Category III) for the National Register

because of the lack of culturally diagnostic artifacts. It has low potential to address the questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility.

Site 41HP183

This site (Figure 8-39) is located on the crest and slopes of a large northeast-southwest trending ridge at the southern edge of the South Sulphur River floodplain. The site is ca. 700 m (2,296 ft) west of Merrit Creek. The South Sulphur River lies 1,500 m (4,920 ft) to the southeast. An intermittent drainage is also nearby, running 250 m (820 ft) north of the site. The crest of the ridge is wooded, and the northeastern end of the site is currently used for grazing. Elevation of the site varies between 137 m (450 ft) above msl and 143 m (470 ft) above msl, and the mapped soil type is Ellis clay. In its native state, this site was located in an upland forest dominated by oaks. Having been lumbered, the site is secondary forest today.

Stratigraphy

Only two natural soil strata were identified at site 41HP183, which is marked by a veneer of

Uvalde gravel. Stratum I is a brown clay which is the weathered marl from which the Ellis clay has formed. There is no Uvalde gravel present in this stratum, which is also culturally sterile. The upper boundary of this stratum is diffuse, and is encountered 5-10 cm below ground surface. The stratum was excavated to 25 cm below ground surface. It is horizontally continuous across the site.

Stratum II, the surface soil horizon, is an organically enriched clay. Pebbles are common in the upper 5 cm of this stratum. This stratum is shallow, extending only 5 cm below ground surface.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, surface collections, shovel testing, and photography. The shovel test (25 cm x 25 cm x 30 cm) excavated for the permanent datum was sterile. A series (n=4) of shallower 35 cm x 35 cm x 15 cm shovel tests from the ridge top down slope were excavated at 25 cm intervals (see Figure 8-39). All units were culturally sterile.

A surface scatter of lithics and fire-cracked rock was noted in pedestrian survey. The site,

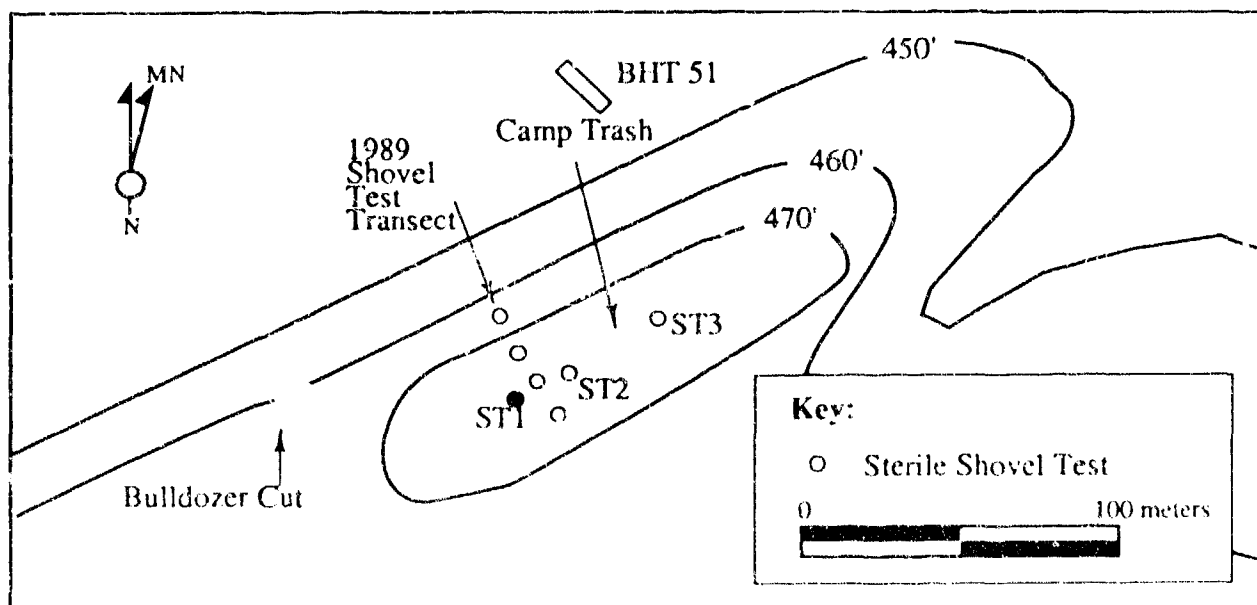


Figure 8-39. Plan of site 41HP183, showing locations of shovel tests and BHT 51.

however, has been severely eroded and artifacts were found in erosional gullies. Artifacts were collected over a 100 m x 300 m area. Flakes, cores, fire-cracked rock, and tested cobbles collected from the surface of the site indicate that the site was used for lithic reduction activities. Two backhoe trenches, BHT 51 (see Figure 8-39) and BHT 52 (see Figure 6-6), were excavated at the base of the slope, one of which (BHT 51) recovered a single piece of fire-cracked rock at a depth of 53 cm below surface. A bulldozer cut provided additional surface exposure.

A subsequent phase of shovel testing was initiated in March 1991 to reevaluate the previous investigations. Three shovel probes, spaced at 25-50 m intervals, were excavated along the spine of the ridge. Uvalde gravel was present only in Stratum II 0-5 cm. A single flake (Ogallala quartzite) was recovered from Shovel Test 1, Stratum II 0-5 cm (see Figure 8-39). Modern trash dumped on the site indicates that this area has been used for camping in the recent past.

Recommendations

Due to the lack of temporally diagnostic artifacts, the site is classified as unknown prehistoric. The site is deemed clearly not eligible (Category III) for nomination to the National Register. Although this site was used as a source for lithic materials as indicated by the presence of tested, reduced, and possibly heat-treated Uvalde cobbles, the recovered artifact assemblage is too meager to address the chronological and material culture research questions presented in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41HP184

This prehistoric site (Figure 8-40) is located at the southern edge of the South Sulphur River floodplain. The site lies in an eroded area on and below the eastern slope of a large, northwest-trending ridge at an elevation between 134 m (440 ft) and 137 m (450 ft) above msl. There is an intermittent drainage gully 60 m

(196.8 ft) west of the site. Merrit Creek lies 800 m (2,624 ft) to the east, and the South Sulphur River is 1,500 m (4,920 ft) northeast. The mapped soil type is an eroded Ellis clay. In its native state, this site was located in an upland forest which was dominated by oaks. It has been lumbered and is pasture with scattered trees today.

Stratigraphy

Three natural soil strata were identified at site 41HP184. Stratum I is the weathered marl which formed the Ellis clay. This stratum was encountered 0-17 cm below ground surface and has a diffuse upper boundary. This stratum is culturally sterile.

Stratum II, the remnant of a B soil horizon, was present in a single shovel probe (Shovel Test 2). The upper boundary at this stratum was encountered at 5 cm below surface, and it extended to 17 cm below surface. This stratum is culturally sterile.

Stratum III is also discontinuous across the site, due to erosion. This soil stratum, an organically enriched surface soil horizon with few pebbles, is culturally sterile.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, surface collection, shovel testing, and photography. The shovel test (25 cm x 25 cm x 30 cm) excavated for the permanent datum (see Figure 8-40) was culturally sterile. The site was discovered during pedestrian survey, when flakes and tested cobbles were observed in a 60 m x 30 m eroded area in level pasture east of a small drainage gully. Backhoe Trench 53 was excavated at ca. 40 m north-northeast of the site (see Figure 8-40, Figure 6-6), but was culturally sterile. Artifacts recovered at the site include 17 whole flakes, one broken flake, one utilized flake, one core, five tested cobbles, and two pieces of shatter.

Additional shovel testing to assess the site's partially intact surface soils was conducted in March 1991. Four shovel tests (35 cm x 35 cm and 50 cm x 50 cm by 30 cm deep) were excavated at 20 m intervals with negative results.

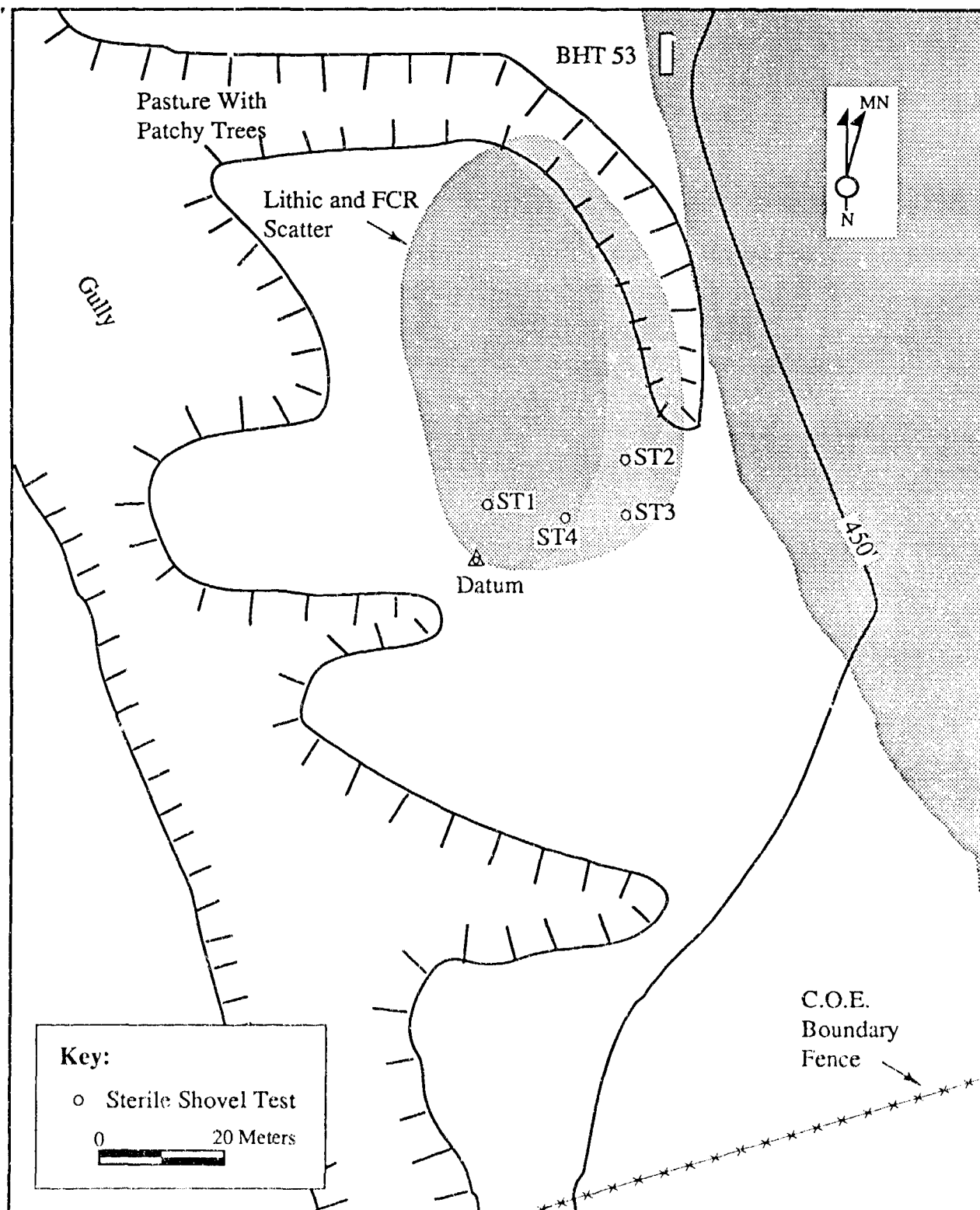


Figure 8-40. Plan of site 41HP184, showing locations of shovel tests, surface artifacts, site limits (as defined by surface artifacts), and BHT 53.

Recommendations

Since no temporally diagnostic artifacts were recovered from the site, it is classified as unknown prehistoric. The artifact assemblage indicates that the site functioned as a lithic reduction area. The site is deemed clearly not eligible (Category III) for nomination to the National Register. The relatively small artifact assemblage, the absence of culturally or temporally diagnostic artifacts, and total erosion of the site eliminates it from consideration as a viable locality for

addressing the technological, subsistence, material culture, and chronological questions presented in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended.

Site 41HP185

This prehistoric site (Figure 8-41) is located on the toe of a west-facing slope in an open grassy area 400 m (1,312 ft) east of the South Sulphur

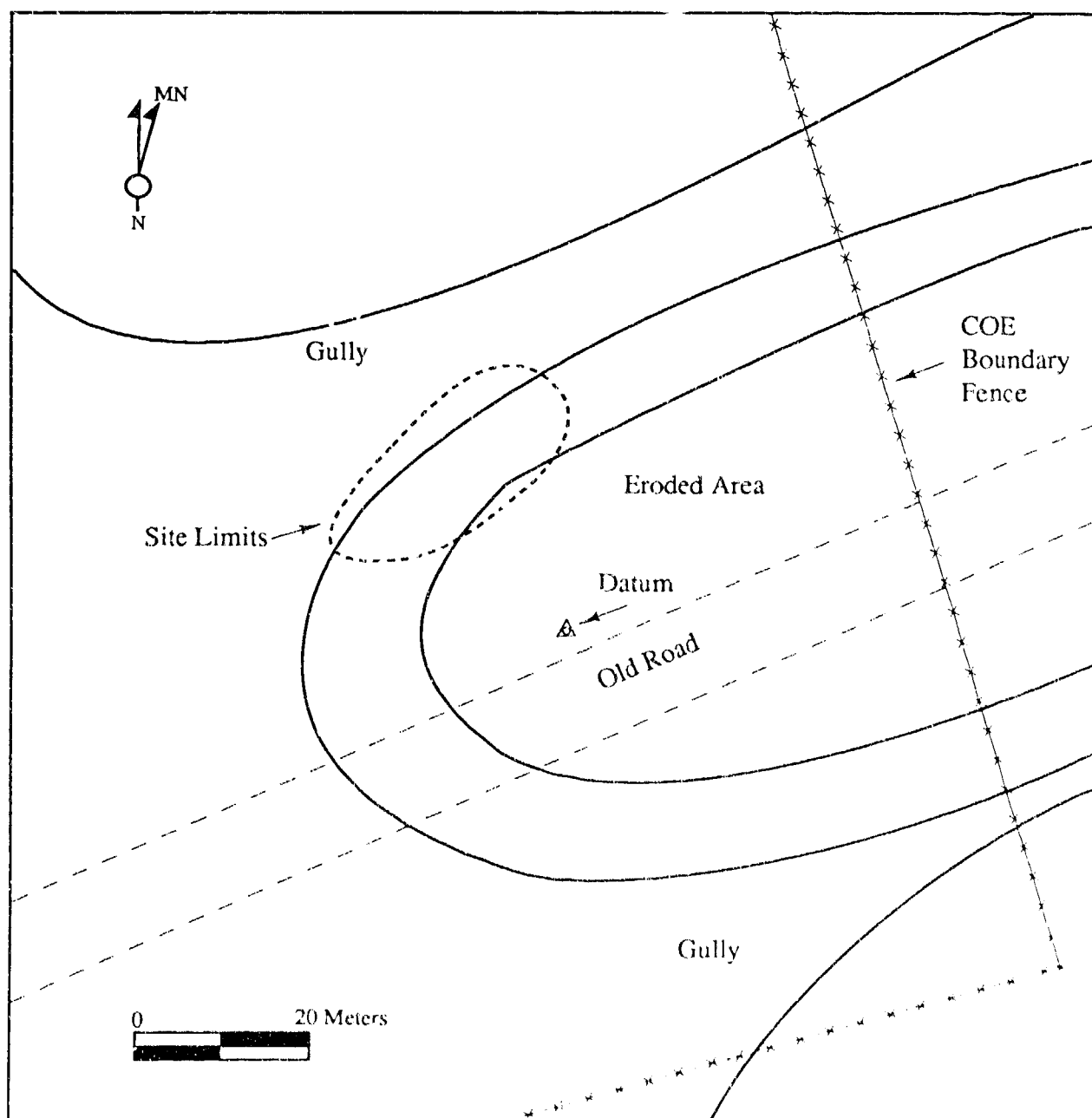


Figure 8-41. Plan of site 41HP185, showing location of site datum, site limits, and eroded area.

River. The site is currently used for grazing. An intermittent drainage lies 60 m (196.8 ft) southwest of the site. The site is bordered on the north by a small gully and on the south by an old road bed. Elevation of the site is 137 m (450 ft) above msl, and the mapped soil type is Heiden clay, 5% slopes. In its native state, the site was in upland forest dominated by oaks. It has been cleared and plowed in the past.

Stratigraphy

The single soil stratum identified at site 41HP185 is a yellow clay that represents the weathered marl of the Kincaid Formation (Ferring 1993:E3-5). The stratum is assumed to be horizontally continuous, exposed in all areas of the site and extremely eroded. The mapped soil is a mottled, olive gray (5Y5/2) and light olive brown (2.5Y5/6) clay.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (35 cm x 35 cm x 10 cm) excavated at the site was sterile. A permanent datum was placed in this unit.

During pedestrian survey, flakes and cobbles were collected from the surface in erosional gullies over a 10 m x 20 m area. Erosional gullies are located northwest and south of this surface scatter (see Figure 8-41). A total of five whole flakes, seven broken flakes, two pieces of shatter, two tested cobbles, one early aborted biface, and one Gary dart point (Figure 8-42) were collected.

Recommendations

The site is thought to date to the Late Archaic period based on the recovery of a Gary dart point, and appears to have functioned as a lithic reduction site and hunting camp. Extreme erosion of the Heiden clay has removed all site soils. The site is deemed clearly not eligible (Category III) for inclusion in the National Register because there are no *in situ* deposits. The site's artifact assemblage is too small to provide interpretable information on lithic reduction techniques and

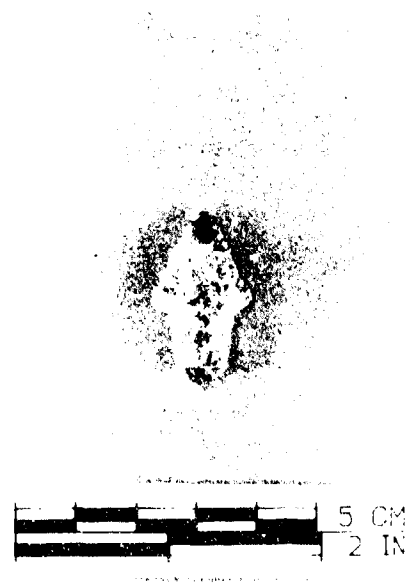


Figure 8-42. Projectile point from site 41HP185, Delivery Order Number 7 study area: Gary dart point (surface).

strategies, material culture questions, and settlement pattern questions outlined in the Research Design. Should information be found that warrants additional consideration, 41HP185 will be reevaluated for National Register eligibility. No further work is recommended.

Site 41HP186

This historic farmstead (Figure 8-43) is located on a low, north-trending ridge above the Merrit Creek floodplain at an elevation of 143 m (470 ft) above msl. Merrit Creek lies 1.4 km (0.9 mi) north of the site. An unnamed drainage gully which runs into Merrit Creek lies 120 m (393.6 ft) to the east. An old road enters the site from the south. The mapped soil type is Ellis clay. In its native state, the site was in upland forest dominated by oaks.

Stratigraphy

The typical soil profile for the Ellis clay is an A horizon (0-15 cm), a B2 horizon (15-50.8 cm), a B3 horizon (50.8-78 cm), and a C horizon

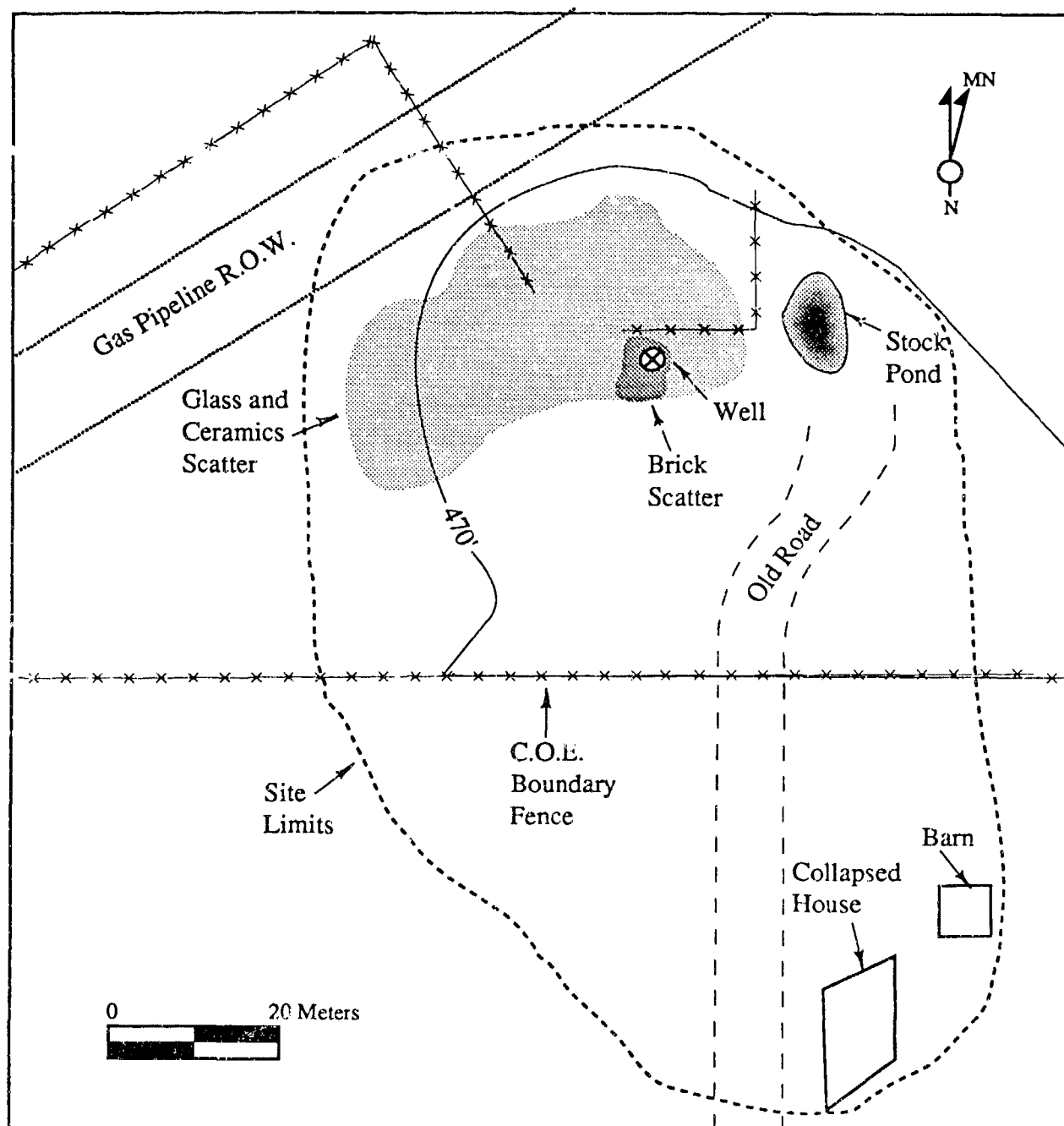


Figure 8-43. Plan of site 41HP186, showing locations of surface features, artifacts scatters, site limits (as defined by surface artifacts and features), and aboveground disturbances.

which is shale marl. The A soil horizon was absent over 30% of the site due to erosion.

Archival Information

Site 41HP186 is located within one of the J. Nidever surveys (A-707), which was a 129 ha

(320 acre) land grant patented by Levi Mullholland on November 28, 1857 (Hopkins County Deed Book B:437). In 1937, site 41HP186 was located on a 67 ha (166 acre) tract owned by Jeff D. Lindley of Ridgeway, who had obtained the property by estate division in 1916 (Hopkins County Deed Book 92:143). The farm was leased

to tenants. At that time, 0.4 ha (1 acre) was reserved for the home, 0.4 ha (1 acre) for the garden, 26 ha (64 acres) were in pasture, and 40.5 ha (100 acres) were in cultivation (4 ha [10 acres] of corn and 36.4 ha [90 acres] of cotton yielding 0.10 bale/ha [0.25 bale/acre]). Two shacks and a barn were listed, which are probably related to site 41HP186. One "shack" measured 24 ft x 24 ft, had four rooms, and was built in 1912. The second "shack" measured 12 ft x 28 ft, had two rooms, and was built in 1914. The barn measured 14 ft x 28 ft and was built in 1914.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit.

Historic sheet refuse was noted over a 2,400 m² area during pedestrian survey (see Figure 8-43). The CE fence cuts through the site. To the southeast of the fence are the remains of a barn and a collapsed house, which are outside the survey area. The site contains a stock pond and a well, the latter of which is lined with machine-made brick.

A total of 18 historic artifacts were recovered from surface contexts at 41HP186. The assemblage consists of three refined earthenwares, three stoneware fragments, five bottle glass fragments (one manganese solarized, one brown, one light green, and two clear), three pieces of table glass (milk), and four miscellaneous items (two Boyds canning lids, one stove part, and one lead nail cap). One light green soda bottle (ABM) was marked "Sulphur Springs Tex." Another clear bottle, possibly a soda bottle, read "minimum contents full half pint, bottle patented March 9, 1920." The manganese glass bottle fragments indicate a date of ca. 1880-1920. The Bristol stonewares indicate a date of ca. 1890-1930. One ironstone/whiteware had a partial maker's mark which may be read "Crown Potteries Co.," and dates ca. 1902-1962; another had green transfer printed letters reading "U.S.A."

Recommendations

The site's historic occupation dates from the early to mid-twentieth century. The single flake is thought to be an isolated find. Portions of the site fall outside the project area and require no further evaluation. The site is deemed clearly not eligible (Category III) for the National Register. The historic component would in all likelihood provide redundant information if further investigations were conducted. The prehistoric component has too little information to address the material culture and chronological questions outlined in the Research Design. Archival and informant researches indicate that the site has no historical significance. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility.

Site 41HP187

This historic farmstead (Figure 8-44) is located near the tip of a north-trending ridge, ca. 1,446 m (4,742.9 ft) south of Merrit Creek. A small north-flowing tributary of the South Sulphur River lies 145 m (476 ft) east of the site. Site 41HP75 is located 200 m (656 ft) to the north. The site elevation ranges between 137 m (450 ft) and 140 m (460 ft) above msl. The mapped soil type is Kaufman clay. An unnamed road passes through the site from north to south. In its native state, the site was in upland forest dominated by oaks with a mixed hardwood forest downslope.

Stratigraphy

A single soil stratum was identified at site 41HP187. This is a dark gray (10YR4/1) clay which contains the historic deposits. It is continuous across the site, with some truncation due to erosion along the road.

Archival Information

Site 41HP187 (along with 41HP186) is located within one of the J. Nidever surveys (A-707), which was a 129.5 ha (320 acre) land grant patented by Levi Mullholland on November 28, 1857 (Hopkins County Deed Book B:437).

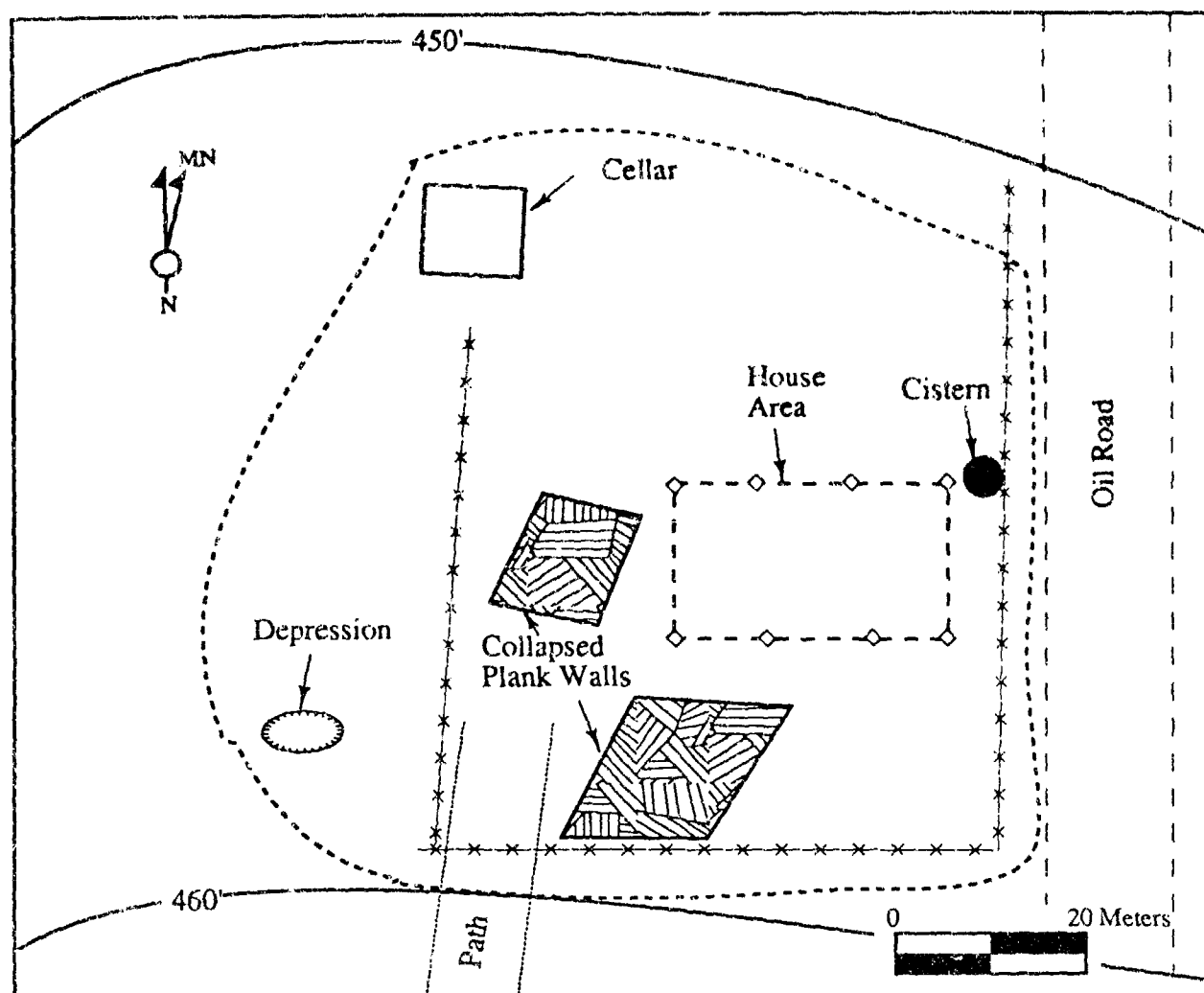


Figure 8-44. Plan of site 41HP187, showing site limits as defined by surface artifacts and features.

In 1937, site 41HP187 was located on a 36.9 ha (158 acre tract) owned by Mrs. Dora Lindley of Ridgeway, who had obtained the property by estate division in 1916 (Hopkins County Deed Book 92:143). The farm was leased to tenants. At that time, 0.4 ha (1 acre) was reserved for the home, 0.4 ha (1 acre) for the garden, 22 ha (56 acres) were in pasture, and 40.5 ha (100 acres) were in cultivation (8.1 ha [20 acres] for corn and 32.4 ha [80 acres] for cotton yielding 0.10 bale/ha [0.25 bale/acre]).

A five-room residence measuring 24 ft x 36 ft was present. This structure was built in 1908. A three-room "shack" measuring 24 ft x 24 ft was also present, but its construction date is unknown. An undated barn measuring 24 ft x 30 ft was associated with this shack, and a 1908 barn,

measuring 30 ft x 40 ft, was associated with the residence. Based on this information, site 41HP187 is the residence, with the shack and two barns also potentially located on or adjacent to (but outside the CE fence) the site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit.

The ruins of a wooden house with a collapsed, machine-made brick chimney, a cistern/well lined with machine-made brick, a

storm cellar, another depression (possibly a cellar), and a scatter of historic artifacts were noted during the pedestrian survey (see Figure 8-44). The cistern/well contains some modern trash, including wire and bottles. Sheet refuse was collected over a 600 m² area.

A number of artifacts were recovered from surface contexts at 41HP187. The assemblage consists of 30 items, including eight refined earthenwares, three stonewares, 11 bottle glass fragments, four tablewares, one zinc canning lid, one stove part, a lead nail cap, and a rodent mandible (non-food item).

Four ironstone/whiteware fragments dating between 1840 and 1910 were discovered, as well as one whiteware fragment with imitation flow blue dating between 1890 and 1925. The Bristol slipped stonewares include two fragments of a milk churn lid which dates back to between 1890 and 1930. All bottle glass fragments are produced by the automated bottling machine process. One Hazel Atlas fragment dates ca. 1920-1964, and one Owens Illinois fragment dates ca. 1929-1954.

Recommendations

The occupation of this site dates from the turn of the century to the mid-twentieth century. The twentieth century occupation appears to have adversely affected the slightly earlier occupation of the site. The site is deemed clearly not eligible (Category III) for nomination to the National Register. The serial occupation and intensive mid-twentieth century use has reduced its potential to address the historic settlement and material culture research questions. Archival and informant researches indicate that the site has little local or regional historic significance. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility.

Site 41HP188

This prehistoric and historic site (Figure 8-45) is located on the floodplain margin of the South Sulphur River at the base of a north-facing slope. The South Sulphur River lies 700 m (2,296 ft) to the northwest. An unnamed intermittent drainage lies 20-30 m (65.6-98.4 ft) to the east, and Merritt

Creek runs 2 km (1.2 mi) to the east. Elevation of the site ranges between 139 m (455 ft) and 140 m (460 ft) above msl. The mapped soils at the site are Ellis clay and Wilson clay loam. In its native state, the area containing the site was a floodplain forest.

Stratigraphy

Backhoe Trenches 65 and 67 were excavated several hundred meters east and west of site 41HP188, respectively. Each revealed similar soil strata, which represents the same soil and landform type at site 41HP188. Three natural soil strata were identified.

Stratum I is a dark gray (2.5Y4/0) clay with light olive brown (2.5Y4/0) mottles. It has an abrupt upper boundary at 1.0 m below surface and was excavated to 1.8 m below ground surface. It is culturally sterile.

Stratum II is a gray (10YR4/1) clay with light olive brown (2.5Y5/4) mottles. It has an abrupt upper boundary at 40 cm below surface. It is culturally sterile.

Stratum III is a light olive brown (2.5Y5/4) clay loam. This is the surface horizon, and all historic materials were confined to this stratum.

Archival Information

Site 41HP188 is located on the William Moore Survey (A-628). The original patent for this 112.8 ha (278.73 acre) tract could not be found by the WPA surveyors in the Hopkins County Courthouse in 1936. Site 41HP188 is located on a 52.8 ha (130.5 acre) tract which was owned by T. I. Knight of Commerce, who purchased the property for \$9,272.50 in 1905 (Hopkins County Deed Book 56:121). In 1936, the same property was assessed at only \$810.00 and was leased to tenants. At that time, 0.6 ha (1.5 acres) was reserved for the house, 0.2 ha (0.5 acre) for the garden, 6.3 ha (15.5 acres) were wasteland, and 45.7 ha (113 acres) were in cultivation (12 ha [30 acres] for corn and 33.6 ha [83 acres] for cotton yielding 0.2 bale/ha [0.5 bale/acre]).

A two-room shack measuring 24 ft x 24 ft was present. This structure was built in 1890. A barn measuring 12 ft x 18 ft was built in 1911.

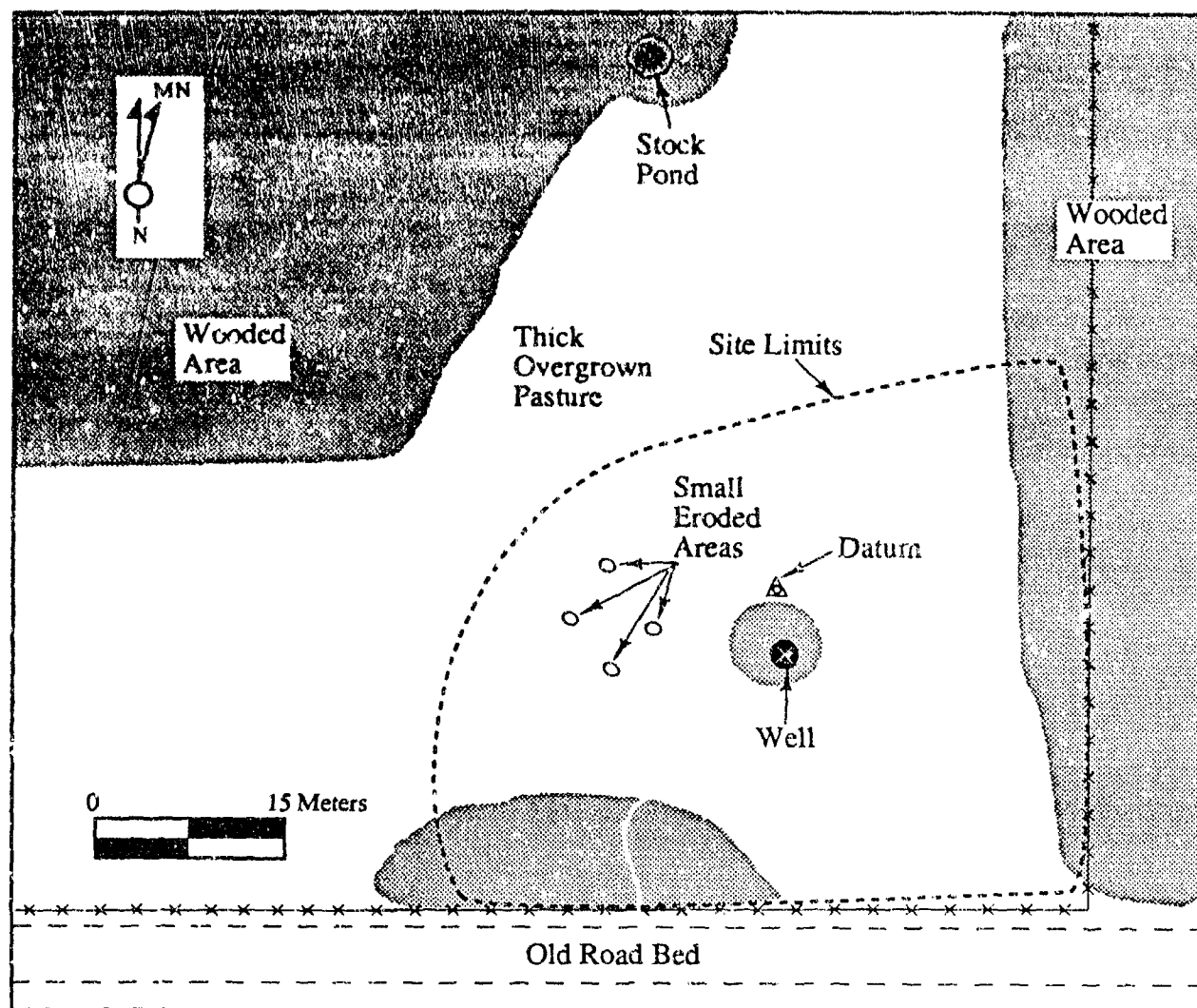


Figure 8-45. Plan of site 41HP188, showing locations of site datum, surface features, and site limits as defined by surface artifacts.

This evidence establishes that site 41HP188 was initially occupied in 1890 and that most of the outbuilding construction was completed by 1911.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit.

This site is bordered on the south by an old road bed and the CE fence (see Figure 8-45). A cistern lined with machine-made brick is present

15 m north of the CE fence, and a stock pond is located 75 m northwest of the cistern. Although ground surface visibility was poor, the aboveground features and eroded areas indicated that the site size encompassed 2,500 m². Artifacts noted in survey were concentrated in a 15 m² eroded area.

A number of artifacts were recovered from surface contexts at 41HP188. The assemblage consists of 53 items, including nine refined earthenwares, five stonewares, five bottle glass fragments, seven table glass sherds, 19 vessel glass fragments, and one piece of window glass. In addition, one clothing rivet, one wire nail, two hand-made bricks, one iron nut, and two milk

glass canning lids were recovered. Distinctive ceramics included a sponge-decorated (blue and green) ironstone body sherd (dating ca. 1850-1870) and six high-fire ironstones dating to the late nineteenth and early twentieth centuries. Stonewares included Bristol slipped and alkaline types dating from 1875 to the 1950s. A small manganese solarized panel bottle (ca. 1880-1920), a machine-made aqua bottle (1900-1920), two brown snuff bottle bases, and a single bottle rim were also recovered. The material remains indicated an occupation from the late nineteenth to the early twentieth centuries. A tested cobble and one flake were also collected.

Recommendations

Archival research indicates that this historic farmstead was first occupied in the 1890s. The recovery of some artifacts dating to this time supports this data. The most intensive occupation was from 1911-1936. The intensive occupation of the historic component has altered the context and integrity of the prehistoric component. The site is deemed clearly not eligible (Category III) for the National Register because it has low potential to address the historic and prehistoric material culture and settlement questions outlined in the Research Design. Archival information indicates that the site was serially occupied by tenants since the 1890s. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility.

Site 41HP189

Site 41HP189 (Figure 8-46) is a historic farmstead near the Peerless community. It is located at 140 m (460 ft) above msl in an upland setting. The soil type is an eroded Ellis clay. In its native state, the site was in upland forest dominated by oaks. The present vegetation consists of second-growth trees (bois d'arc, locust, and oaks) in an old pasture.

Stratigraphy

Two natural soil strata were identified at site 41HP189. These are described in order from oldest (lowest) to youngest (uppermost). Stratum

I is horizontally continuous across the site. Overlying Stratum II has been so heavily eroded that Stratum I, the subsoil of the Ellis clay, has been exposed over approximately 30% of the site surface area. Stratum I is a yellowish brown (10YR5/0) loam derived from the marl bedrock of the Kincaid Formation. The upper boundary of Stratum I is abrupt and occurs at ground surface to 10 cm (3.93 in) below ground surface. It was excavated to a maximum depth of 30 cm (11.8 in).

Stratum II is horizontally discontinuous across the site area. Underlying Stratum I is exposed in 30% of the area. Vertically, Stratum II occurs from ground surface and extends to a maximum depth of 10 cm (3.93 in) below ground surface. It is a sandy loam with fallow field root systems in its upper limits. It exists mainly where ground cover has kept it from being completely eroded. The ground surface is littered with historic debris and artifacts from the historic occupation, which ended prior to 1964. The site is currently used for livestock stabling.

Archival Information

Site 41HP189 is located on one of several Nancy Webb surveys (A-1159) in northern Hopkins County. The 259.4 ha (640.99 acre) tract containing site 41HP189 was patented as a 259 ha (640 acre) grant on February 15, 1849 (Hopkins County Deed Book 8: 198). Two additional surveys (A-1151 and A-1160) were granted to her in northern Hopkins County. In 1936, site 41HP189 was located on the boundary of an 32.4 ha (80 acre) tract belonging to H. J. Cox and a 23.1 ha (57 acre) tract belonging to Oma Mead. Mr. H. J. Cox of Ridgeway obtained the property in 1926 (Hopkins County Deed Book 117: 377) and resided on and/or worked the land himself. In all, 0.2 ha (0.5 acre) was reserved for home, 0.2 ha (0.5 acre) for garden, 30.4 ha (75 acres) in cultivation (7.3 ha [18 acres] in corn and 23.1 ha [57 acres] in cotton), and 1.6 ha [4 acres] were wasteland. The house contained a fireplace and four rooms, and was built in 1901. A barn built in 1910 was also present. This deed information indicates serial occupancy of the Cox tract.

Mrs. Oma Mead, of Sulphur Bluff, purchased her 23.1 ha (57 acre) tract in 1932

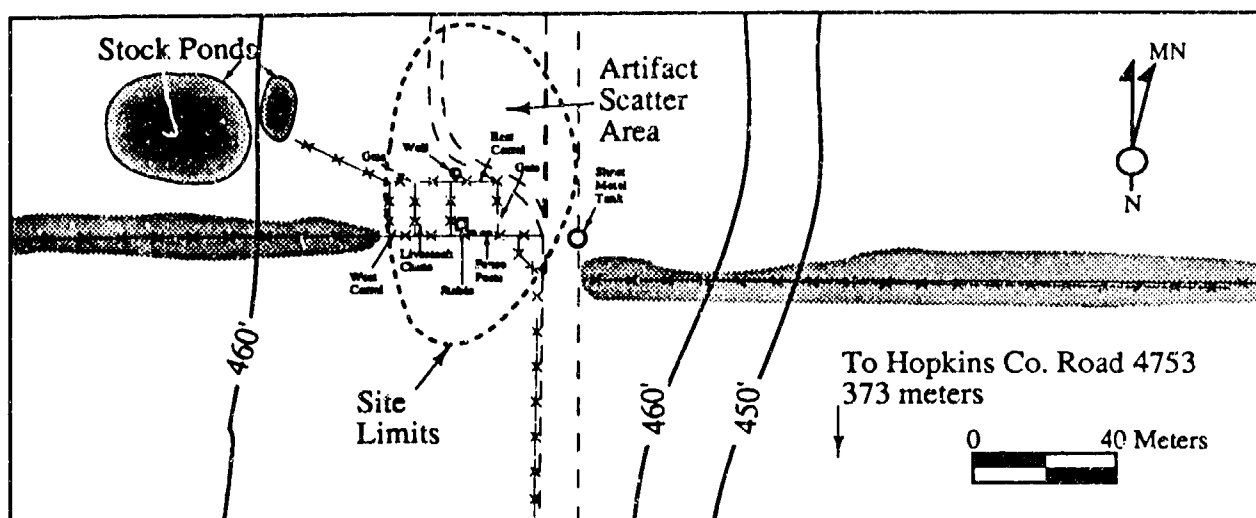


Figure 8-46. Plan of site 41HP189, showing locations of surface features and site limits as defined by surface artifacts.

(Hopkins County Deed Book 127: 551) and leased it to tenants. In 1936, 0.4 ha (1 acre) was reserved for the home, 0.4 ha (1 acre) for garden, 14.2 ha (35 acres) were in cultivation (3.2 ha [8 acres] in corn and 10.9 ha [27 acres] in cotton), 2 ha (5 acres) were wasteland, and 6.1 ha (15 acres) were pasture. The two dwellings noted for this tract include a four-room building measuring 24 ft x 24 ft that was built in 1913, and a two-room building measuring 24 ft x 12 ft that was built in 1909. A barn (20 ft x 40 ft) was also present, built in 1913.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit (see Figure 8-46).

Site 41HP189 consists of an artifact scatter and features noted during pedestrian survey. The site covers an area of 11,100 m², including the stock tanks and fences. The features present include a standing barn or stable composed of wooden planks, beams, wire nails, and a corrugated sheet metal roof; a corral surrounding the barn/stable; and a collapsing circular cistern/well lined with machine-made bricks.

The artifact scatter consists of machine-made brick, sheet metal, ceramics, and bottle glass fragments. Stonewares, whitewares, milk glass fragments, pieces of manganese, aqua, pale green, and clear vessel glass, mason jars, one redware doorknob, one porcelain handle, and one unidentified metal fragment were also recovered. The manganese glass dates from ca. 1890-1910. The redware doorknob also dates to the turn of the century. Other historic items date from the first quarter of the century to the present.

Artifacts and features at the site indicate the remains of an abandoned late nineteenth and early twentieth century farmstead. The operation of this farm began ca. 1901 and continued through the 1930s. It was owned by at least two different individuals, H. J. Cox or Oma Mead, who were both non-resident landowners. The domicile was removed prior to 1964, since it is not shown on the USGS map. The condition of the stable and corral suggest that they were in use until recently. The farm was probably part of the Peerless Community. There are no surface indications of a house, but the artifacts indicate that such a structure was present, but has been destroyed.

Recommendations

Archival and informant information indicates serial occupancy of this site by unknown tenants. The site is deemed clearly not eligible (Category

III) for nomination to the National Register due to serial use of the site and extreme disturbances by ranching activities since 1964. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

DELTA COUNTY SITES

Site 41DT4

This prehistoric site was originally recorded as 41-19C5-2 by Edward Moorman in 1951. It was located adjacent to the South Sulphur River within a series of meanders. It is elevated at 134 m (440 ft) above msl. In its native state and still today, the site is in dense floodplain forest consisting of mixed hardwoods.

Archaeological Investigations

In 1951, site 41DT4 was assumed to be outside of the reservoir area. There was little discussion of its contents (Moorman and Jelks 1952:4), and no further investigations were recommended.

Fieldwork conducted under Delivery Order Number 7 included multiple visits to the densely wooded banks of the South Sulphur River. Flooding and dense vegetation have altered the landscape, and flood chutes have cut across the meanders of the channel. Despite more than five person days of effort, no evidence of this site was discovered.

Recommendations

Due to dense vegetation, mechanical exploration for this site was not possible. If the vegetation is cleared during reservoir construction, it may be possible to relocate the site. Since it was not relocated, and may be a "capped ridge mound" site, it is classified as Category II, possibly eligible for the National Register. However, since several "capped ridge mound" and associated midden sites have been intensively investigated in Cooper Lake, this site may provide redundant information.

Site 41DT5

Prehistoric site 41DT5 was originally recorded as 41-19C5-16 by Edward H. Moorman in 1951, when it was described as an open site covering 10 ha (25 acres). This site is located at 133.2 m (437 ft) above msl in the South Sulphur River floodplain. The site's native vegetation consisted of hardwood forest. Today, the site is in pasture, but it was heavily cultivated in the 1950s.

Archaeological Investigations

In 1951, surface collection yielded six Gary points, eight miscellaneous dart points, bifaces, and scrapers; three untyped arrow points; and a plain potsherd. The site was revisited in 1959 and was surface collected by Duffield and Davis (Duffield 1959:3). At that time, the engineers indicated that the site would not be affected by reservoir construction, and no further work was recommended. David Dibble's inventory of the TARL collections for site 41DT5 in 1986 mentions two Gary points, six bifaces, two choppers, three flakes, two plain ceramics, and one fired clay lump.

Fieldwork conducted under the terms of Delivery Order Number 7 consisted of pedestrian reconnaissance at 20 m intervals. A total of two person days was expended in attempts to relocate this site. However, the entire floodplain was under water, and the area did not dry out during this portion of the field survey. This general area was subsequently revisited by David Saunders in July 1990 after the completion of fieldwork, and a topographic feature (mound) was observed in the mapped location of site 41DT5. Despite the claims of Moorman and Jelks (1952:4) that no mounds were present on this site, it is not clear whether the two observed localities represent the same site.

Recommendations

The area where 41DT5 is located was under intense cultivation during the early twentieth century and has been collected by both avocational and professional archaeologists as well as by pothunters. Moorman and Jelks (1952:4) state that 41DT5 was the largest site encountered in their survey and was evidently the site of a large

village. It was assessed as being "of unquestionable importance" and recommended for as complete an excavation as possible. Since it was impossible to perform mechanical excavations in this area due to flooding, and only limited pedestrian coverage was possible, the site was not relocated. Based on the previous studies, the site has been intensively plowed and was multicomponent. The site is therefore classified as Category II, since further evaluations may be necessary to provide a National Register evaluation. If vegetation clearance and plowing are performed in this area, surface collections and site relocation may be possible.

Site 41DT6 (The Tick Site)

This prehistoric site (Figure 8-47) was originally recorded as 41-19C5-15 by Edward H. Moorman in 1951. It was subsequently recorded as X41DT37 by SMU in 1970. In an interim report both X41DT36 and X41DT37 were referred to as the "Luna sites" (Doehner and Larson 1975:13). Later, site 41DT6 was renamed the Tick site. The site is located on a low rise, 20 m (65.6 ft) west of the South Sulphur River and 900 m (2,952 ft) south of the Middle Sulphur River.

Site elevation is 133 m (435 ft) above msl, and the mapped soil type is Kaufman clay. In its native state, this was a floodplain forest consisting of mixed hardwoods. Several land disturbances associated with construction of a levee, a nearby road, and a gas well are present at the site.

Stratigraphy

Five natural strata were defined at site 41DT6 in two Backhoe Trenches (BHT 109 and BHT 111). The profile from BHT 111 is presented in Figure 8-48 and described below.

Stratum I is a dark grayish brown (10YR4/2) sandy clay loam with light brown (7.5YR6/4) mottles. It has a distinct upper boundary at 1.3 m below ground surface and was excavated to 1.88 m below surface. It is culturally sterile.

Stratum II is a black (10YR2/1) clay which is extremely compact. It has a distinct upper boundary at 80 cm below surface. It is culturally sterile.

Stratum III is a very dark gray (10YR3/1) clay. It has a distinct upper boundary at 45 cm below ground surface. Cultural materials noted within this stratum in the profile of BHT 109 include two flakes, two bone fragments, and one fire-cracked rock.

Stratum IV is a brown (10YR5/3) fine sandy loam. It has a distinct upper boundary at 38 cm below ground surface. The majority of cultural materials recovered in shovel tests and BHT 109 were from this stratum. Artifacts from this stratum include a dart point, one bone fragment, and four fire-cracked rocks. This stratum represents the historic land surface.

Stratum V is a dark grayish brown (10YR4/2) compact clay. It is discontinuous across the site where partially removed by bulldozing activity. It is culturally sterile in BHTs 109 and 111.

Archaeological Investigations

When the site was first visited by Moorman, it was described as a small (0.5 acre) midden mound. Gary points, bone, pottery, and a clay pipe were noted. After this work, Harris (1955) excavated a single grave with associated funerary items.

Site 41DT6 was reinvestigated in 1970 after the area had been extensively plowed. Surface collection at the site yielded 41 artifacts. This collection was dominated by fire-cracked rock (41.5%), flakes (44%), projectile points (7%), pottery (5%), and cores (2%). Two Gary points were the most culturally diagnostic items recovered.

In 1975, 41DT6 was investigated (as site X41DT37) via the excavation of 10 test units. An additional three burials (two extended and one flexed) were recovered. Additional artifacts noted (but not quantified in the interim report) included faunal remains and stone tools (Doehner and Larson 1975:16). Site 41DT6 was interpreted as a possible permanent base camp and further excavation was recommended (Doehner and Larson 1975:20).

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian reconnaissance, mapping, photography of all land disturbances (see Figure

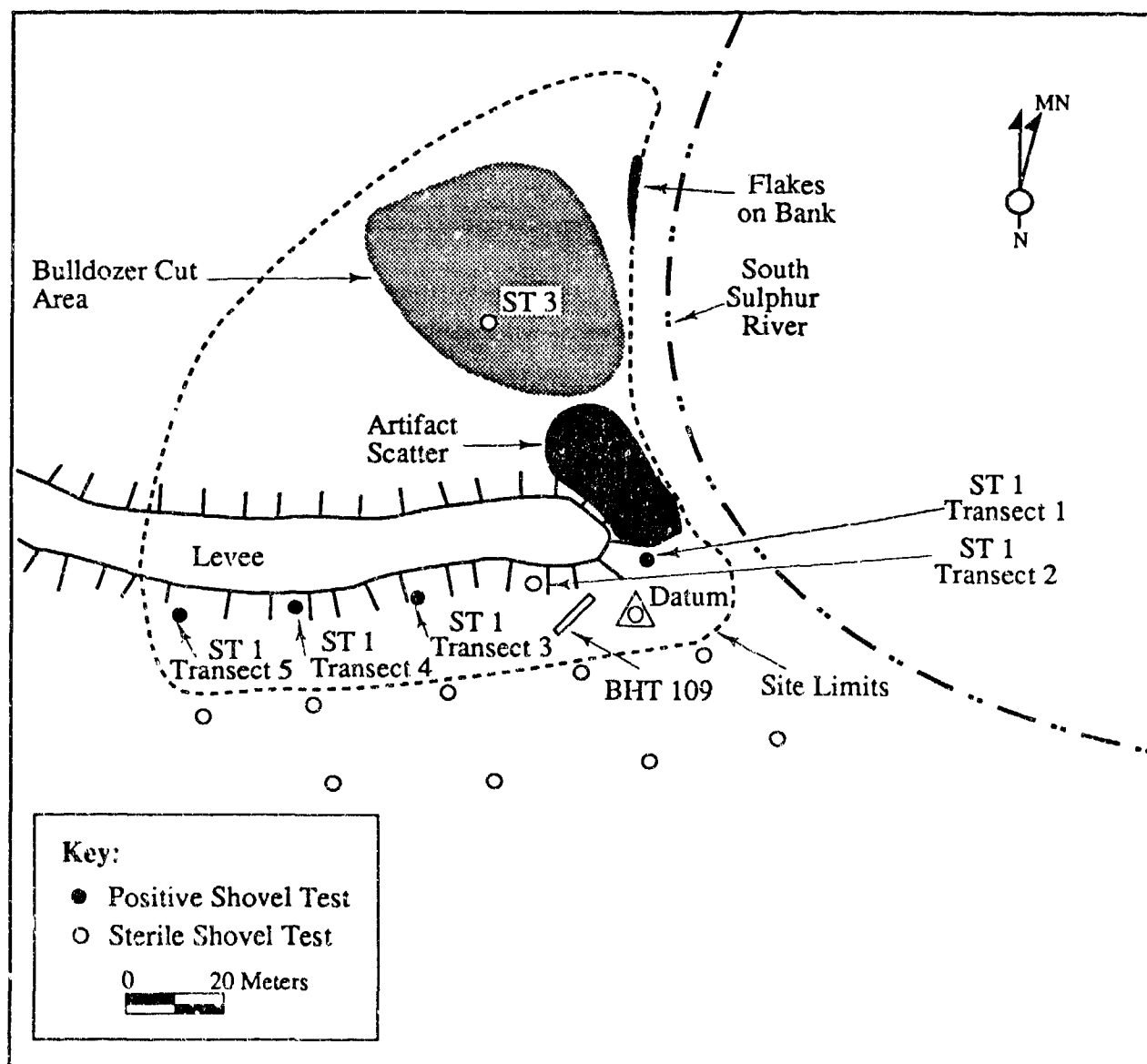


Figure 8-47. Plan of site 41DT6, showing locations of shovel tests, surface artifacts, BHT 109, site limits, and land modifications.

8-47), and shovel testing to determine if cultural deposits were still intact. In addition, one backhoe trench (BHT 109) was excavated on the site, revealing a buried midden deposit and a total of three projectile points. The other trench (BHT 111) was found to be culturally sterile. Fire-cracked rock, flakes, shell, and calcined bone were visible in this area. The buried midden deposit was located 20-30 cm below surface. This midden varies between 40 cm and 50 cm in thickness. A total of 15 shovel tests were excavated east of the levee in an attempt to

determine site boundaries. The site continues under the levee and extends 10 m eastward. From the northern end of the levee, the site extends 60 m southward.

The majority of the artifacts that were recovered came from four excavation units (Table 8-8). Shovel Test 1 in Transect 3 (see Figure 8-47) produced the most remains (61% of the total 1989 collection). A contracting stem (Gary) dart point, a tested cobble, three core fragments, seven modified flakes, a biface, a uniface, and 28 fire-cracked rocks (364 g) comprise the lithic

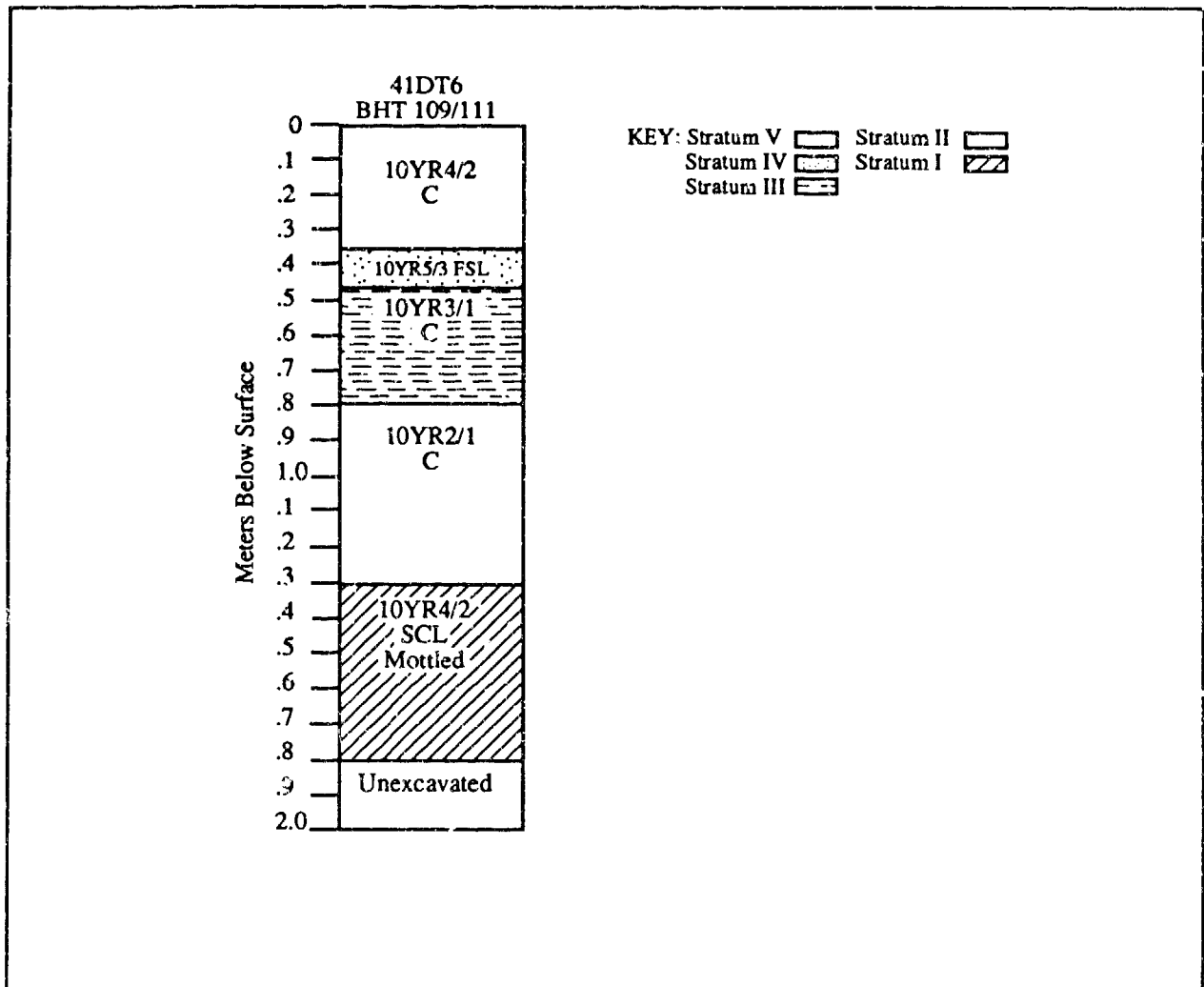


Figure 8-48. Stratigraphic profile of BHT 111 at site 41DT6.

assemblage. All lithic materials were Ogallala quartzite. Two plain grog-tempered sherds, two mammal bone fragments, and a piece of baked clay (possibly daub) also derive from this unit.

The second most productive unit was Shovel Test 1 in Transect 4, which yielded 25% of all recovered artifacts. Pottery comprised the most numerous remains from this unit ($n=10$), with fingernail-punctated and plain grog-tempered body sherds and a single plain rim sherd. Two flakes, a biface, a core, and one fire-cracked rock (all Ogallala quartzite) were also recovered. An unidentified large mammal bone, baked clay, and charcoal also were recovered from this unit.

Shovel Test 1 in Transect 1 yielded only nine items. These were primarily quartzite flakes and 115 g of fire-cracked rock ($n=2$). A single bone (unidentified mammal) was recovered. Shovel Test 1 in Transect 5 recovered only one (166 g) fire-cracked rock. Projectile points from the site are shown in Figure 8-49.

In addition to the recovery of these materials, out-of-context cultural remains were observed on the west bank of the South Sulphur River and in a bulldozer cut associated with construction activities near and on the site (see above, see Figure 8-47).

TABLE 8-8

Distribution of Prehistoric Artifacts at Site 41DT6,
Delivery Order Number 7 Study Area

Unit	Depth (cm)	Points	Bifaces	Unifaces	Flakes	Cores	FCR	Bone	Charcoal	Ceramic	Clay	Total
BHT 109	39	1	—	—	—	—	—	—	—	—	—	1
	52	1	—	—	—	—	—	—	—	—	—	1
	58	1	—	—	—	—	—	—	—	—	—	1
Transect 1												
ST 1	50	—	—	—	6	—	2	1	—	—	—	9
Transect 2												
ST 1	25-58	2	—	—	—	—	—	—	—	—	—	2
Transect 3												
ST 1	70	1	1	1	1	3	28	2	—	2	1	40
Transect 4												
ST 1	50	—	1	—	2	1	1	1	1	10	1	18
Transect 5												
ST 1	50	—	—	—	—	—	1	—	—	—	—	1
Surface	0	1	—	1	1	1	—	1	—	1	—	6
Total		7	2	2	10	5	32	5	1	13	2	79

NOTE: Point from BHT 109, 39 cm is a Steiner arrow point. All other points listed are Gary darts.



Figure 8-49. Projectile points from site 41DT6, Delivery Order Number 7 study area. Top row (left-right): Steiner arrow point (surface), Gary dart point (Transect 3, ST 1, 70 cm), Gary dart point (Transect 2, ST 1, 25-58 cm), Gary dart point (Transect 2, ST 1, 25-58 cm). Bottom row (left-right): Gary dart point (surface), Gary dart point (BHT 109, 52 cm), Gary dart point (BHT 109, 58 cm).

Recommendations

Based on the results of this testing and previous investigations, the densest part of site 41DT6 is still intact, and the backhoe excavation indicates an intact midden. All previous investigators have recommended further work for this site. Four human burials have been excavated from the site, as well as artifacts reflecting domestic and subsistence practices. It is possible that undisturbed human remains are still present. Site occupation dates from the Late Archaic (based on diagnostic projectile point types; see Figure 8-49) to the Late Prehistoric (based on the recovered ceramics) periods. In contrast to the previous assessment of this locality by Doehner and Larson (1978:67), site 41DT6 is considered to be highly significant, and is potentially eligible for nomination to the National Register (Category I). Further work is recommended.

Site 41DT7

This prehistoric site (Figure 8-50) was initially recorded as X41DT38 by SMU in 1970. The site was first described as a disturbed lithic site, with few points and no pottery. At that time only the prehistoric component was recorded, although the Luna house was present. It is located 480 m (1,574.4 ft) west of the Middle Sulphur River and 550 m (1,804 ft) northwest of the South Sulphur River, on a remnant landform known as Lost Ridge. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Annaona loam. In its native state, the site was in floodplain forest consisting of mixed hardwoods.

Stratigraphy

Three natural soil strata were identified at site 41DT7. They are described below in order from oldest (lowest) to youngest (uppermost). Stratum I is part of the remnant knoll, possibly Pleistocene in age, which forms Lost Ridge. It is a mottled reddish yellow (7.5YR6/8) clay. It is horizontally continuous across the site and has been exposed by erosion in approximately 30% of the site surface area.

Stratum II appears to be the remaining portion of an A or B soil horizon at the site. It is

discontinuous across the site. This is a brown (7.5YR5/2) silty clay. The upper boundary is diffuse and varies from ground surface to 5 cm below ground surface.

Stratum III is a thin layer of brown (7.5YR5/2) clay which contains fallow field grass roots and organic matter. It, too, is discontinuous across the site. Stratum III is the surface horizon and has resulted from historic land modification practices, including plowing and the use of the area for pasture.

Archival Information

Site 41DT7 (along with sites 41DT6, 41DT52, 41DT53, 41DT55, and 41DT175) is located in one (A-209) of two surveys for William Kimble. The WPA file for the second William Kimble tract (A-208) was obtained, but the WPA file for A-209 may have been destroyed. The other tract (A-208) is located south of Klondike and was the most intensively occupied. The Hopkins County Levee District Map, compiled in 1914-1915 indicates only a single house within A-209, the Lost Ridge area, located in the vicinity of site 41DT55.

Archaeological Investigations

Surface collections made in 1970 recovered 305 items. The dominant category was flakes (60%), followed by fire-cracked rock (32%). Cores and bifaces each comprised 7.7% of the assemblage. Seven utilized flakes and a single dart point completed the assemblage. The dart point was a contracting stem Gary type made of Ogallala quartzite.

During the 1989 survey, the site was revisited and the historic component was recorded (see Figure 8-50). Close interval (5 m) pedestrian reconnaissances were performed. Within the site boundaries, a scatter of brick, sheet metal, and wooden boards was found within a 4,800 m² area. Prehistoric artifacts collected from the site include one plain body sherd, one broken flake, and one early aborted biface. Historic artifacts include stoneware, whiteware, manganese solarized and clear glass, machine-made brick, and metal fragments. The historic artifacts date ca. 1890-1910 to the present. The historic house

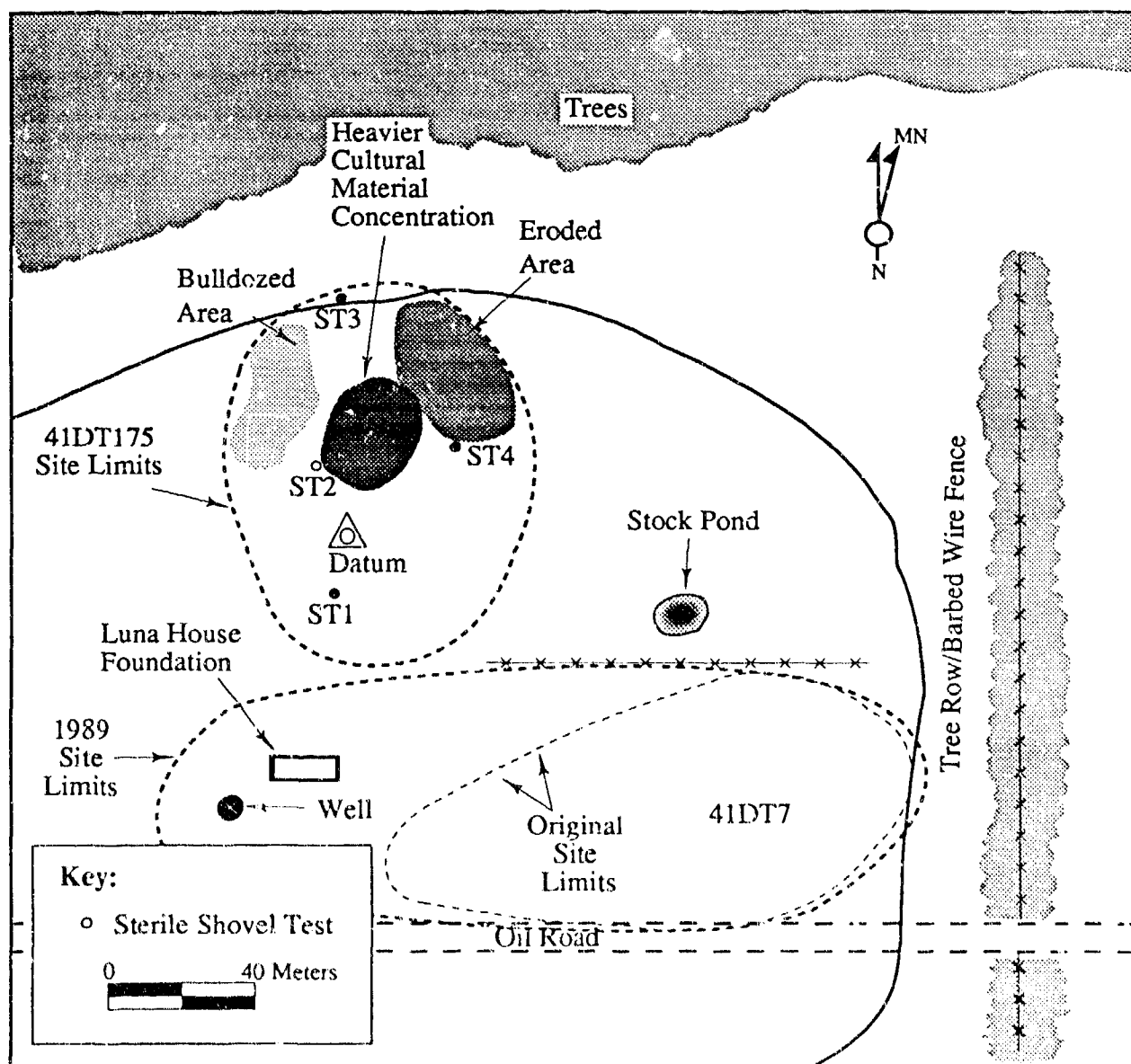


Figure 8-50. Plan of sites 41DT7 and 41DT175, showing locations of surface artifacts, surface features, shovel tests, and aboveground disturbances.

was still standing in the 1970s and was occupied by a tenant.

Recommendations

The prehistoric component is thought to represent a Late Prehistoric period camp and lithic reduction site. Historic occupation of the site dates from the turn of the century to the second and third quarters of the twentieth century. Archival and informant researches do not indicate any

historical significance for this site and the Luna Farm. Due to the recent disturbance and shallow nature of this site it is not deemed significant (Category III). The serial and recent occupation of the historic component has reduced the site's potential to address the material culture and settlement questions in the Research Design. The historic occupation has also altered the prehistoric component's integrity. If future information is found that warrants additional consideration, this site will be reevaluated for NRHP eligibility.

Site 41DT11

This prehistoric site (Figure 8-51) was recorded by Moorman in 1951. It is located on a knoll 100 m (328 ft) north of the channelized Middle Sulphur River and 400 m (1,312 ft) east of FM 1531. Elevation at the site varies between 137 m and 140 m (450 ft and 460 ft) above msl. The mapped soil type is Crockett loam. In its native state, the site was in floodplain forest. The area has been altered by lumbering and the construction of a levee, and the site presently is in pasture with secondary tree growth.

Stratigraphy

Two natural strata were identified in BHT 19, excavated by Bousman and Collins in the midden area at site 41DT11 (Bousman, Collins, and Pertulla 1988:51). These strata are discussed in order from oldest (lowest) to youngest (uppermost).

Stratum I, the basal clay, is continuous across the site area. It is a light yellowish brown (2.5Y6/4) sandy clay. It was excavated to 110 cm below ground surface. Calcium carbonate concretions are abundant. Stratum I is culturally sterile.

Stratum II is a very dark gray (10YR3/1) silty loam with fallow field root systems in its upper portion. Roots and rodent burrows are abundant. This stratum is an anthropic horizon, enriched by human occupation. All cultural materials were recovered from this stratum. Upslope, this horizon is thin, with few shell or bone fragments. Downslope, by the fence, the soil has accumulated to 45 cm in depth, with abundant, well-preserved shell and bone.

Archaeological Investigations

When recorded in 1951, Moorman collected pottery, dart point fragments, and burned bone from the site. In 1970, SMU conducted a

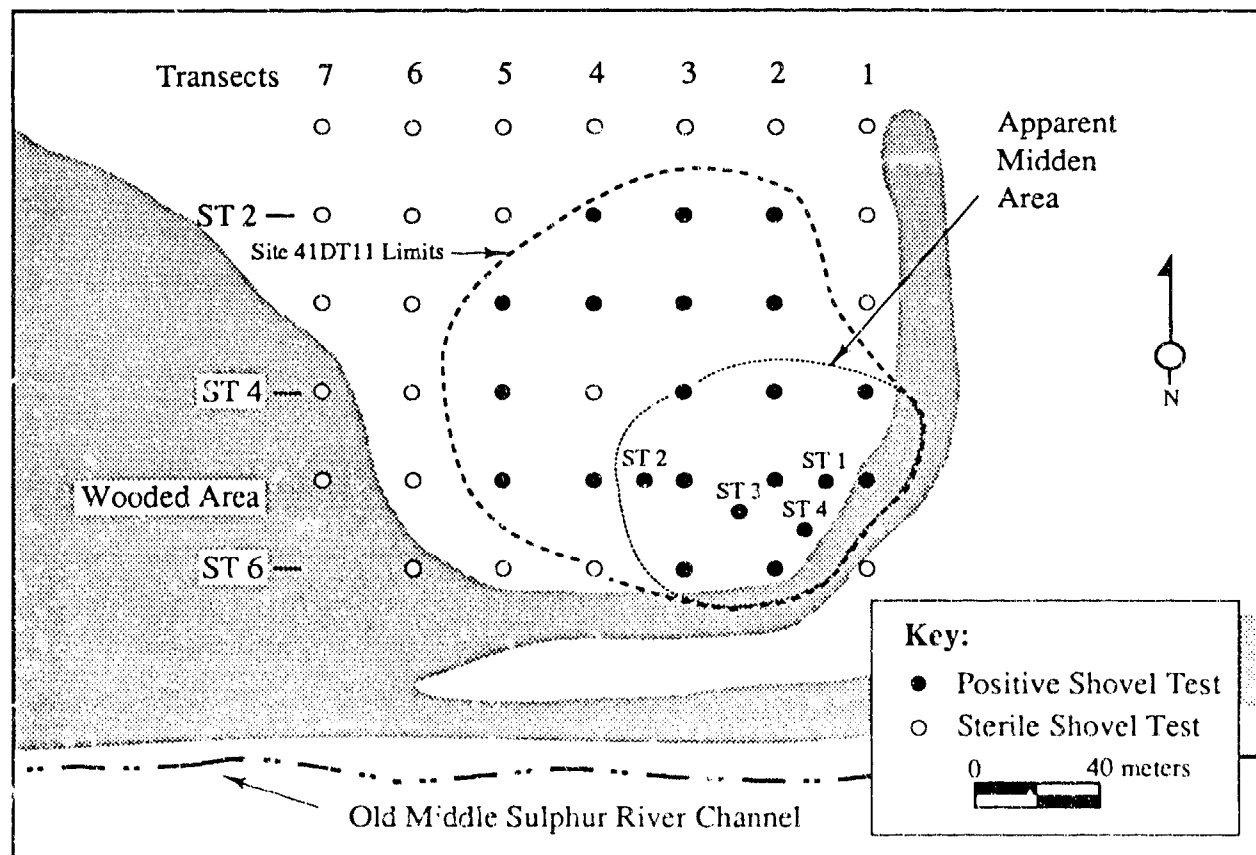


Figure 8-51. Plan of site 41DT11, showing locations of shovel tests, the apparent midden, and shovel tests, and site limits.

surface collection of flakes, bifaces, mussel shell fragments, a dart point base, and fire-cracked rock from the site. In 1986, 41DT11 was revisited by Bousman and Collins (Bousman, Collins, and Perttula 1988), who excavated BHT 19 in the site's midden and another trench on the ridgetop.

Fieldwork conducted at site 41DT11 under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey to relocate this site. In all, 45 shovel tests (averaging 50 cm x 50 cm x 30 cm) were excavated on a 20 m interval grid (see Figure 8-51). Site area, as determined by testing and surface collection, is 4,800 m². Prehistoric artifacts were found mostly 0-20 cm below ground surface. The surface investigations indicated a darkened area with concentrated mussel shell and bone fragments. This appears to be a midden area, but also could be an area where topsoil and perishable remains have been redeposited by cultivation and erosion.

The artifact assemblage recovered from surface and controlled excavation contexts includes 240 items (Table 8-9). Fire-cracked rock composed 75.8% of the assemblage. Flakes were the second most frequent artifact category (11.06%). Bone (10 g), shell (8 g), charcoal (1 g), edge-modified flakes (n=5), cores (n=3), and groundstone (n=3) were also present. A single dart point tip and one grog-tempered ceramic sherd were also recovered.

Within the site boundaries, artifacts were concentrated near the southern and eastern lower slope of the knoll. Agricultural practices and erosion have spatially displaced cultural materials at the site. Most artifacts were recovered 0-20 cm below ground surface. Artifacts appear to have been redeposited from the crest of the knoll, accumulating along the fence line at the base of the slope to a depth of 45 cm below ground surface. The midden, which contains abundant well-preserved bone and shell fragments, is preserved here. Buried, intact deposits may be present in this portion of this site.

Based on the entire artifact assemblage, site occupation ranges from the Late Archaic to the Late Prehistoric periods. The site appears to represent a series of overlapping temporary camps in the Late Archaic with long-term occupation and midden accumulation during the Late Prehistoric period.

Recommendations

Site 41DT11 is a possible multicomponent prehistoric site with little depth and no vertical separation. However, the presence of a midden and deeper deposits at the base of the slope may have sealed intact the cultural deposits. Further work may be necessary (Category II) to determine the site's potential for nomination to the National Register. It is a rather common pattern at Cooper Lake for intact middens to be located on the lower slopes of the larger knolls (e.g., the Manton-Miller, Lawson, and Luna sites). This appears to be the case at 41DT11. House patterns and other domestic features, such as subsurface pits, are often located upslope from middens in Cooper Lake. It is possible that 41DT11 represents a Caddoan period hamlet superimposed over Late Archaic temporary camps.

Site 41DT13

This prehistoric site (Figure 8-52) was originally recorded as 41-19C5-4 by Edward H. Moorman in 1951 and was subsequently re-recorded as X41DT5 by SMU in 1970. It is located on a slope 300 m (984 ft) south of Honey Creek, 220 m (721.6 ft) southeast of the Friendship Church and Cemetery site. Elevation at the site is 132.6 m (435 ft) above msl, and the mapped soil type is Crockett loam. In its native state, the vegetation of this area was a post oak savannah, with adjacent prairies.

Stratigraphy

The landform containing site 41DT13 consists of a series of small mounds, frequently referred to as pimple mounds, with depressions between them. The three natural soil strata identified at this site are described from oldest (lowest) to youngest (uppermost).

Stratum I is a mottled yellow clay which is continuous across the site. The upper boundary of this stratum varies from 5-40 cm below surface. It was culturally sterile and was excavated to a depth of 50 cm.

Stratum II is a light brown silty clay loam which is also continuous across the site. The upper boundary of this stratum varies in depth

TABLE 8-9

Distribution of Prehistoric Artifacts at Site 41DT11,
Delivery Order Number 7 Study Area

Transect Unit	Dart	Util. Flakes	Cores	Flakes	FCR n (g)	Bone	Shell	Charcoal	Ground Stone	Ceramic	Total
Transect 1											
ST 4	—	1	—	1	6 (99)	—	—	—	—	—	8
ST 5	—	—	—	—	1 (45)	—	—	—	—	—	1
Transect 2											
ST 2	—	—	—	1	—	—	—	—	—	—	1
ST 3	—	—	—	1	—	—	—	—	—	—	1
ST 4	—	—	—	3	—	—	1	—	—	—	4
ST 5	—	—	—	3	25 (350)	—	—	—	—	—	28
ST 6	—	—	—	—	16 (217)	1	1	—	—	—	18
Transect 3											
ST 2	—	—	1	—	3 (10)	—	—	—	—	—	4
ST 3	—	—	—	1	—	—	—	—	—	—	1
ST 4	—	—	—	1	—	—	—	—	—	—	1
ST 5	—	1	—	2	19 (254)	1	2	1	—	1	27
ST 6	—	—	—	—	1 (27)	1	1	—	—	—	3
Transect 4											
ST 2	—	1	—	1	2 (19)	—	—	—	—	—	4
ST 3	—	—	—	1	1 (2)	—	—	—	—	—	2
ST 5	—	—	—	—	—	—	1	—	—	—	1
Transect 5											
ST 3	—	—	—	—	1 (15)	—	—	—	—	—	1
ST 4	—	—	—	—	1 (13)	—	—	—	—	—	1
ST 5	—	—	—	—	1 (12)	—	—	—	—	—	1
Supp. STs											
ST 1	1	—	—	2	30 (522)	5	—	—	—	—	38
ST 2	—	—	—	2	5 (96)	—	—	—	—	—	7
ST 3	—	1	—	1	14 (221)	—	—	—	1	—	17
ST 4	—	1	—	—	36 (446)	1	1	—	—	—	39
Surface	—	—	2	7	19 (600)	1	1	—	2	—	32
Total	1	5	3	27	181 (2.9 kg)	10	8	1	3	1	240

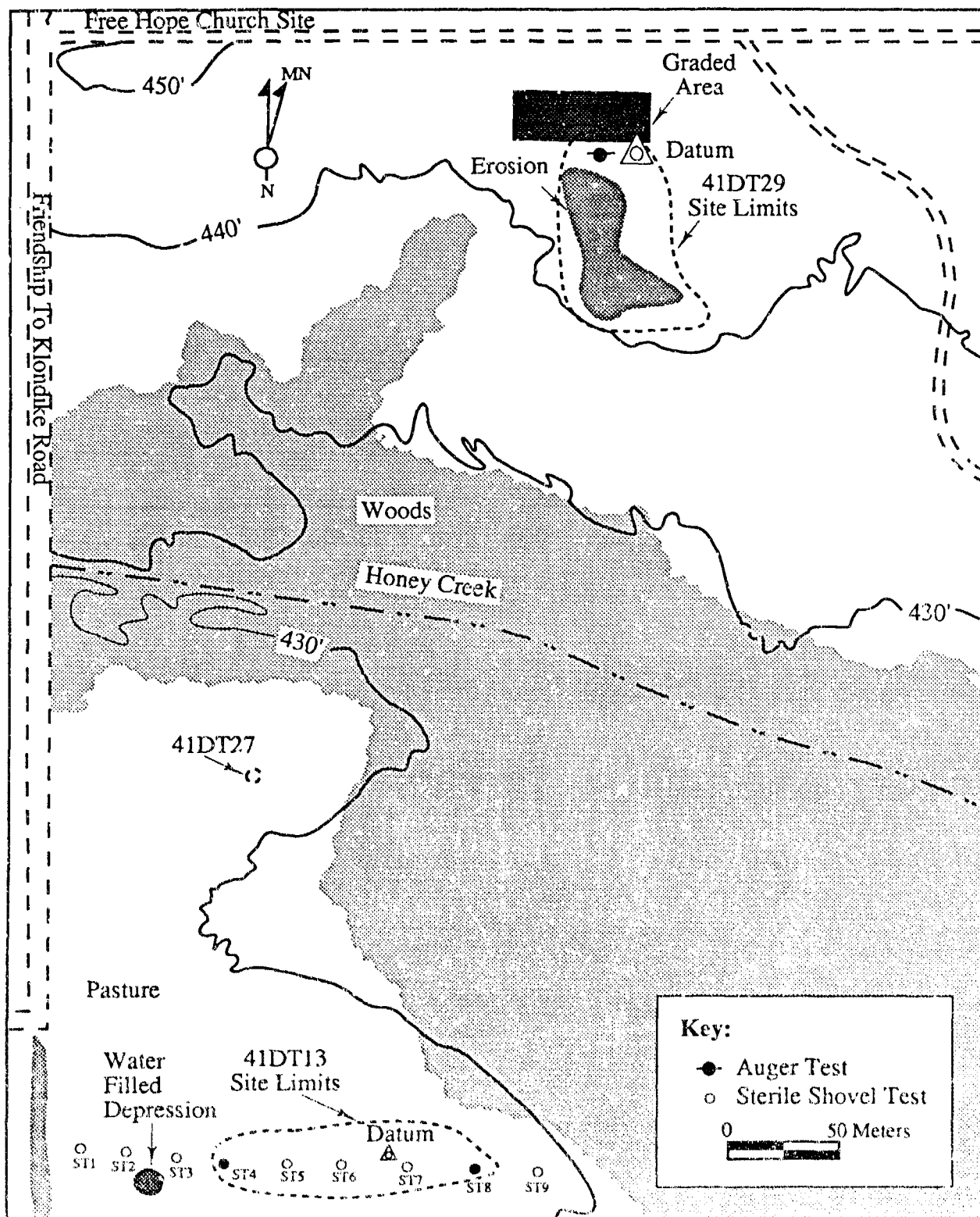


Figure 8-52. Plan of sites 41DT13, 41DT27, and 41DT29, showing the locations of shovel tests, the auger test, site limits, and aboveground disturbances.

from 5-25 cm below surface and extends to depths varying from 20-45 cm below surface. This stratum is also culturally sterile.

Stratum III, the surface horizon, consists of a dark brown silty clay loam, with a well-developed (5 cm) sod. This stratum yielded all cultural materials recovered from the site. Stratum III shows considerable variation in thickness across the site.

Archaeological Investigations

Moorman and Jelks (1952:4,7) defined site 41DT13 as a non-pottery site and recommended limited test excavations. Only lithic debris was reported on the site form. Dart points (unspecified type) were also reported.

In 1970, more intensive mapping and surface collections were performed and the site area was defined as 6,600 m². In total, 331 items were collected, all from surface contexts. Flakes comprised the dominant (60%) category, followed by fire-cracked rock (36%). Retouched pieces (2%) and bifaces and cores (1.8%) rounded out the assemblage. Local Ogallala quartzite comprised 96% (n=75) of the identified lithic material, with chert (2.6%) and petrified wood (1.3%) present in low quantities. Since the site area was actively eroding, exposing cultural materials to a depth of 15 cm, no shovel tests were conducted at that time.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey (see Figure 8-52), shovel tests, and surface collections. Surface collections yielded a total of 28 flakes, all Ogallala quartzite, and one fire-cracked rock.

The shovel testing program consisted of the excavation of nine shovel probes at 20 m (see Figure 8-52) intervals. Probes ranged from 30 cm x 30 cm to 50 cm x 50 cm in size and extended from 20-45 cm below surface. Seven shovel tests were sterile and only two yielded artifacts. Shovel Test 4 yielded one flake and one fire-cracked rock fragment. Shovel Test 8 yielded 15 flakes and five fragments of fire-cracked rock. All subsurface lithic materials were Ogallala quartzite.

Recommendations

Since the only dart points found at this site were recovered in 1951 and were unspecified as to type, no reliable cultural or temporal ascription can be made for the site. At most it is defined as a temporary camp and lithic reduction site. The lack of temporal diagnostics limits the interpretability of the material remains. The shovel tests and surface examinations indicated that erosion has greatly altered the integrity of the deposit. Only a single test (ST 8) indicated that an intact surface soil horizon was present.

The site is deemed not eligible (Category III) for the National Register because it has low potential to address the questions in the Research Design. Temporally diagnostic artifacts, faunal remains, and a spectrum of tool types are not present, limiting the potential to address subsistence research themes. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the site.

Site 41DT14

This prehistoric site (Figure 8-53) is located 870 m (2,854 ft) east of the Friendship Church site, and on the south slope of a knoll that is 250 m (820 ft) east of Honey Creek. Elevation at the site is 131 m (430 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this was a slope forest consisting of post oak savannah.

Stratigraphy

Two natural soil strata were identified at site 41DT14. Stratum I is a brown (10YR4/3) clay. It has a distinct boundary at 12 cm below surface and was excavated to a maximum depth of 15 cm. Stratum I is horizontally continuous across the site locus. It has been exposed over 30% of the site area and is culturally sterile.

Stratum II is a dark brown (10YR3/3) silty clay with rootlets common in its upper portion.

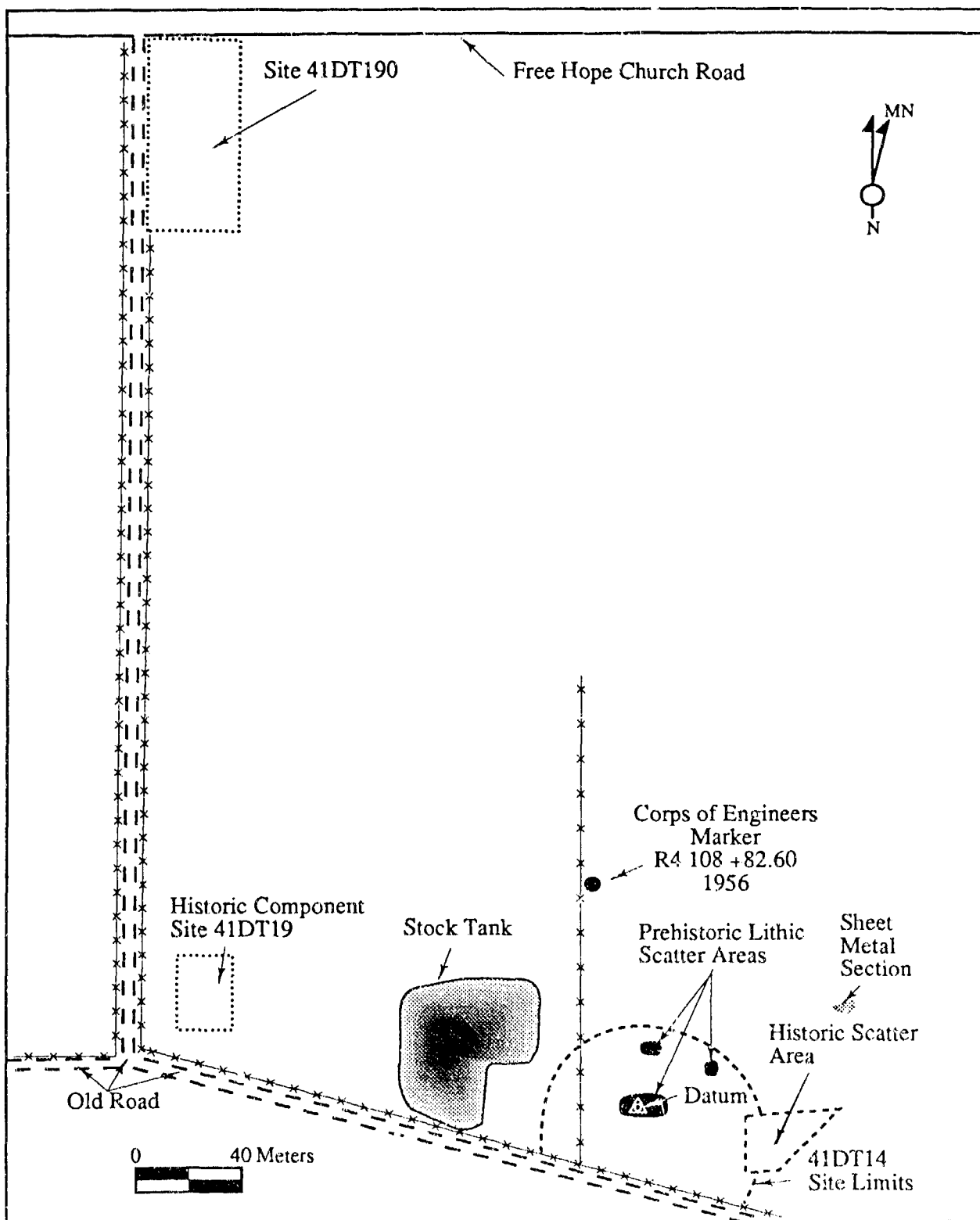


Figure 8-53. Plan of site 41DT14, showing locations of artifact scatters, site datum, site limits (as defined by surface artifacts), and land modifications. Note the position of adjacent sites 41DT19 and 41DT190 in the Friendship Community.

Stratum II, an Ap-horizon, is horizontally discontinuous across the site locus. All cultural materials are derived from this stratum.

Archival Information

Site 41DT14 is located in the Robert Carson (A-87) Survey. The WPA file for this survey was missing from the Delta County Courthouse and may have been lost or destroyed. In 1914-1915 the Hopkins and Delta County Levee District Map shows a road passing by site 41DT14, but no house was present. The closest dwelling was approximately 200 m west, at the location of site 41DT19. Site 41DT19 was reported (see Chapter 7) to be the location of the first Geary House. However, no informant could provide an identity or time span on the house at site 41DT14. On a visit (18 December 1989) to the site area, Mr. Hack Henderson recalled that a one-room house was present. It was apparently occupied for a short period of time in the second half of the twentieth century by unknown tenants.

Archaeological Investigations

This prehistoric site was originally recorded as 41-19C5-5 by Edward H. Moorman in 1951. However, since only very generalized locational information is provided for this site, it cannot be established with certainty whether this is the same locality recorded by Moorman. The site was revisited by Duffield and Davis in 1959. In 1970, the site was resurveyed and rerecorded as X41DT6 by SMU.

Only blades, dart points, and a pitted stone were reported from the 1951 investigations. The A-horizon of the soil was only 12 cm thick, and erosion was extensive. Duffield (1959:2-3) reconfirmed the eroded character of the site and did not recommend further work.

In 1970, the area was reported by SMU to be only 575 m² and was thought to be a single component site dating to the Late Archaic period. Only 87 items were collected from the surface, including flakes (72%) fire-cracked rock (16%), six modified flakes (6.9%), two darts (2.3%) and two dart preforms (2.3%). All lithic materials were Ogallala quartzite. None of the darts were typeable, since they were broken, but two appear

to have been contracting stein varieties.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey. Erosion continues to be a problem at this site, and the site area was increased to 2,000 m² (see Figure 8-53), based on newly exposed areas of cultural debris. Also, a historic component was noted for the first time. A local informant reported a one-room house at this site. A single shovel test (35 cm x 35 cm x 15 cm) was excavated in the southernmost artifact scatter, which was used for the site datum. No artifacts were recovered from this unit.

A surface scatter of flakes and fire-cracked rock was found at the top of the knoll in a 900 m² area. Two smaller lithic scatters are located 20 m to the north and 20 m to the northeast of the top of the knoll. The historic component at the site is located on the east slope of the knoll, within a 750 m² area. Prehistoric artifacts collected from the site include 10 flakes and four fire-cracked rocks.

Historic artifacts include five whitewares, two stonewares, two manganese and one light green vessel glass fragments, one brown glass bottle base, and one machine-made brick. The majority of the historic artifacts date to the twentieth century. The manganese glass dates ca. 1880-1920. A brown transfer-printed ceramic dates from the late nineteenth to early twentieth centuries. The Bristol glazed stonewares date ca. 1875-1930.

Recommendations

Prehistoric use of the site as a lithic reduction camp is of unknown age. The historic component dates primarily from the early to mid-twentieth century with a possible earlier component. Cultural materials have been disturbed by Historic period land clearing and agricultural practices. The site is thought to be clearly not eligible for nomination to the National Register (Category III) because of this lack of integrity. Historical information on the occupation is minimal, and it has low potential to address the material culture, ethnic, and settlement pattern questions in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for NRHP eligibility. No further work is recommended.

Site 41DT18

This prehistoric site may have been originally recorded as 41-19C5-6 by Edward H. Moorman in 1951. As with 41DT14, the locational data is not sufficient to determine whether this site is actually 41DT18. It is located on a large rise in the floodplain of the South Sulphur River. The river lies 460 m (1,509 ft) south of the site. The site is 3.3 km (2 mi) southeast of Klondike. Elevation at the site is 131 m (430 ft) above msl, and the mapped soil type is Annona loam. In its native state, this area was a post oak savannah.

Stratigraphy

The surface of the Annona loam is a dark grayish brown (10YR4/2) silt loam with abundant roots. It appears to be the remnant of a B soil horizon, based on surface examination of site 41DT18.

Archival Information

Site 41DT18 is located on the boundary between the Robert Carson (A-87) and the B. N. Nall (A-254) surveys. The B. N. Nall Survey was an 331.9 ha (820.01 acre) land grant which was patented in 1860 (Delta County Deed Book 33:345). The 1914-1915 field surveys for the Hopkins and Delta Counties Levee District indicate that a road passed through site 41DT18 (as well as 41DT20, 41DT28, and 41DT49), crossing the South Sulphur River and leading south to Peerless.

In 1936-1937, the WPA surveys indicate that site 41DT18 was located in a 16.5 ha (40.79 acre) tract which was owned by the Cooper Motor Company, which had purchased the property for \$525.00 in 1931 (Delta County Deed Book 68:143). In 1936, the property was worth \$220.00. In 1936, 0.2 ha (0.5 acre) was reserved for a house, 0.2 ha (0.5 acre) for a garden, 8.1 ha (20 acres) were in cultivation (all cotton), 6.1 ha (15 acres) were in wasteland, and 1.5 ha (3.79 acres) were woodland. The farm was leased to tenants on a cash basis. The house was described as a one-story, four-room bungalow measuring 24 ft x 32 ft, built in 1934. This house is most likely the historic component of site 41DT18. A house is

shown at the site on the 1924 map of the area. Informant interviews with Mr. Henderson and Jeff Blandon indicated that Calvin Carter lived at the site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance and photography. No shovel tests were excavated since the site is below the 132.6 m (435 ft) above msl contour, the limit for the Delivery Order Number 7 study area. The site area, including ranching features, is 3,200 m².

Although the site is below the current survey area, it is included in this report so that the historic component can be documented. The mapped location of Moorman's 1951 site corresponds to the eastern border of the historic component of 41DT18. A collapsed cistern lined with machine-made brick is present in this part of the site. The remains of a storm cellar are located 15 m south of the cistern. No prehistoric artifacts were observed at the site.

Recommendations

Since this site is outside of the survey area, no further work is recommended. The site is classified as clearly not eligible (Category III) for the National Register.

Site 41DT19

This prehistoric site (Figure 8-54; see Figure 8-53) was originally recorded as 41-19C5-25 by L. F. Duffield in 1959. It was subsequently rerecorded as X41DT3 in 1970. The site is located near the base of a terrace 1.1 km (0.68 mi) north of the South Sulphur River and 170 m (557.6 ft) north of Honey Creek. Elevation at the site is 132 m (432 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this was a post oak savannah.

Stratigraphy

The single soil stratum identified at 41DT19 is a dark grayish brown (10YR4/2) silt loam with abundant roots. It may be a remnant B horizon.

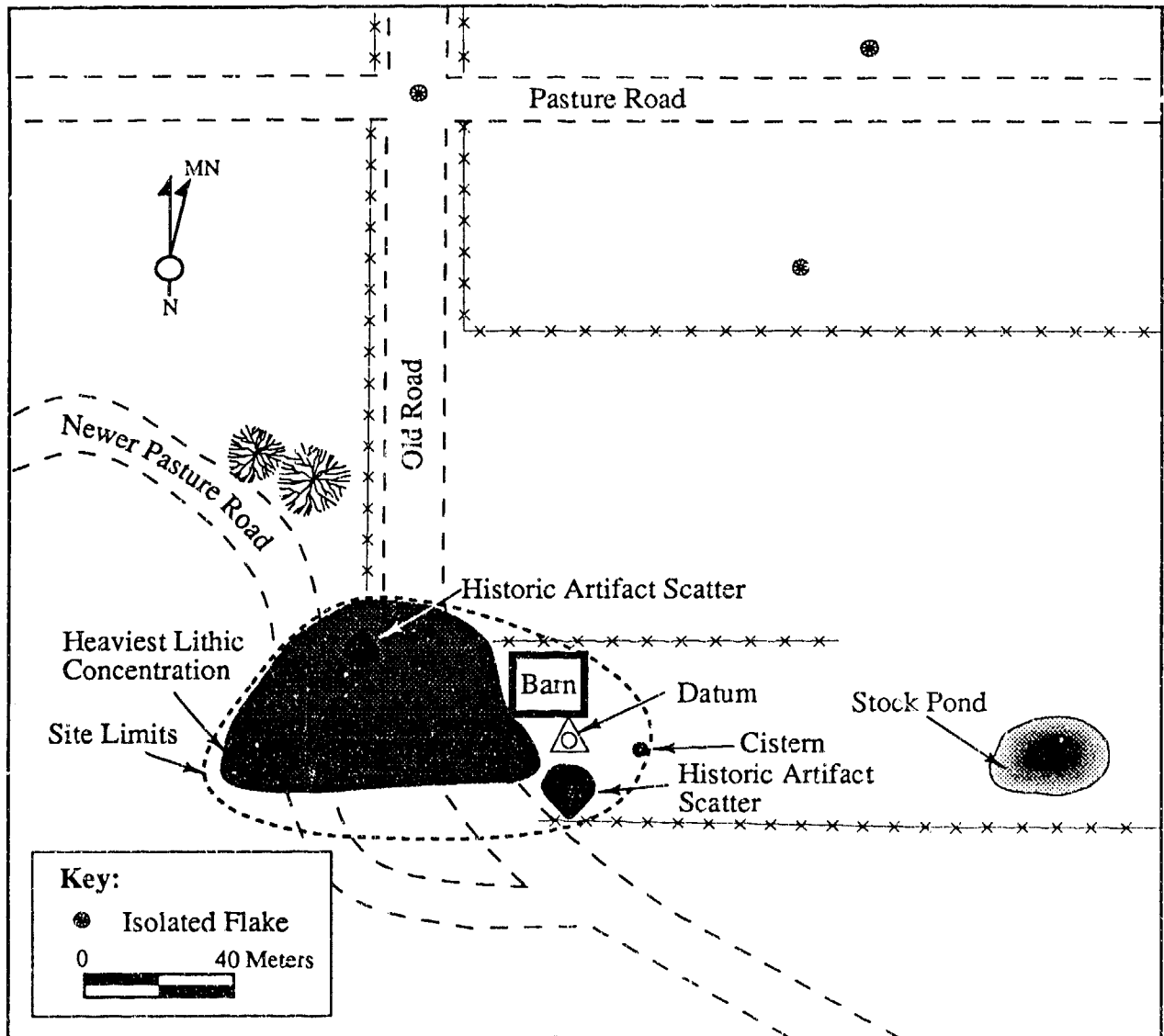


Figure 8-54. Plan of site 41DT19, showing locations of surface features, artifact scatters, site limits, and land modifications.

Archival Information

Informant interviews with Mr. Henderson and Jeff Blandon indicated that the Geary family lived in the house. This house was shown on the 1914-1915 Delta-Hopkins Levee District map.

Archaeological Investigations

In 1959, site 41DT19 was described as being small (0.5 acre) and badly eroded, with a road through the site, leading to a barn. Two dart points (untyped), scrapers, dart point fragments,

and flakes were collected but were not quantified (Duffield 1959:2-3).

In 1970, the site was reexamined and 96 artifacts were collected from the surface. These were primarily flakes (58%) and fire-cracked rock (24%). Cores and bifaces (16%) and retouched pieces (2%) rounded out the assemblage. All lithic materials were Ogallala quartzite.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey and surface collections. A previously unreported historic component was recorded (see Figure 8-54). The remains of a barn

are located in the northeastern part of the site. A cistern lined with machine-made bricks is located 20 m southeast of the barn.

The prehistoric assemblage consisted of a total of 44 whole flakes, 27 broken flakes, seven utilized flakes, nine cores, one early aborted biface, and 15 fire-cracked rocks. All identified lithic materials were Ogallala quartzite.

Several historic artifacts were collected from surface contexts at 41DT19. The assemblage consists of 30 items, including six refined earthenwares, three stonewares, 14 bottle glass fragments, two table glass fragments, one piece of window glass, one staple, a welded (repaired) grinding mill fragment, one stove part, and a milk glass canning lid. The ironstone whitewares date to ca. 1840-1910 and the Bristol glazed stonewares date to ca. 1840-1930. Two fragments of "flashed" table glass date to the early twentieth century. The historic artifact assemblage dates principally from the turn of the century to the 1930s.

Recommendations

Prehistoric occupation of the site dates to the Late Archaic period and is thought to represent a lithic reduction and hunting camp. Historic period occupation of the site dates from the turn of the twentieth century to the 1930s. The site is thought to be clearly not eligible (Category III) for nomination to the National Register. The prehistoric component is too diffusely distributed and of insufficient size to yield interpretable data and address the research questions outlined in the Research Design. The historic component relates to at least one identified occupancy, that of the Geary Family, who were of African American descent. However, the extensive and recent use of the site for livestock stabling and vehicular traffic has altered much of the historic component's integrity. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended.

Site 41DT21

This prehistoric site (Figure 8-55) was recorded by SMU in 1970. Based on its mapped

location, site 41DT21 may be the L. O. Ray site, although the present investigations were unable to confirm this (see Archaeological Investigations, below). It is located on a low rise 800 m (2,624 ft) north of the channelized Middle Sulphur River and 1.65 km (1.02 mi) east of FM 1531. Elevation at the site is 136 m (447 ft) above msl, and the mapped soil type is Benklin silt loam. In its native state, this was a floodplain forest consisting of mixed hardwoods, with a post oak savannah upslope.

Stratigraphy

Three natural strata were identified within the confines of the site locus. These are described below from the oldest (lowest) to the youngest (uppermost). A representative profile from ST 5 in the north-south line is shown in Figure 8-56.

Stratum I (F5) occurs only in this profile, but may be horizontally continuous across the site locus. Vertically, it occurs at a mean depth of 45 cm (17.71 in) below ground surface and extends to a maximum excavated depth of 65 cm (25.59 in) below ground surface. Stratum I is a culturally sterile, compact but plastic silty clay subsoil lacking internal stratification and devoid of any pebbles, gravel, or small stone fragments. The dominant color is very dark gray (10YR3/1).

Stratum II (F4) is horizontally continuous across the probed portion of this site. Vertically, it occurs at a mean depth of 20 cm (7.87 in) below ground surface and extends to a maximum excavated depth of 45 cm (17.71 in) below surface. Stratum II is a very fine, loosely compacted silt loam that is friable when dry but plastic and sticky when wet. It lacks internal stratification and is devoid of small pebbles, gravel, and other stone fragments. The dominant color is pale brown (10YR6/3). It is separated from underlying Stratum I and overlying Stratum III by clear smooth interfaces. There were no artifacts recovered in Stratum II.

Stratum III (F3) is horizontally continuous across the tested portion of the site. Vertically, it occurs from ground surface and extends to a minimum depth of 25 cm (9.84 in) below ground surface. Stratum III is a very fine, compact silt loam containing many organics and forage crop root systems in its upper limits. Stratum III

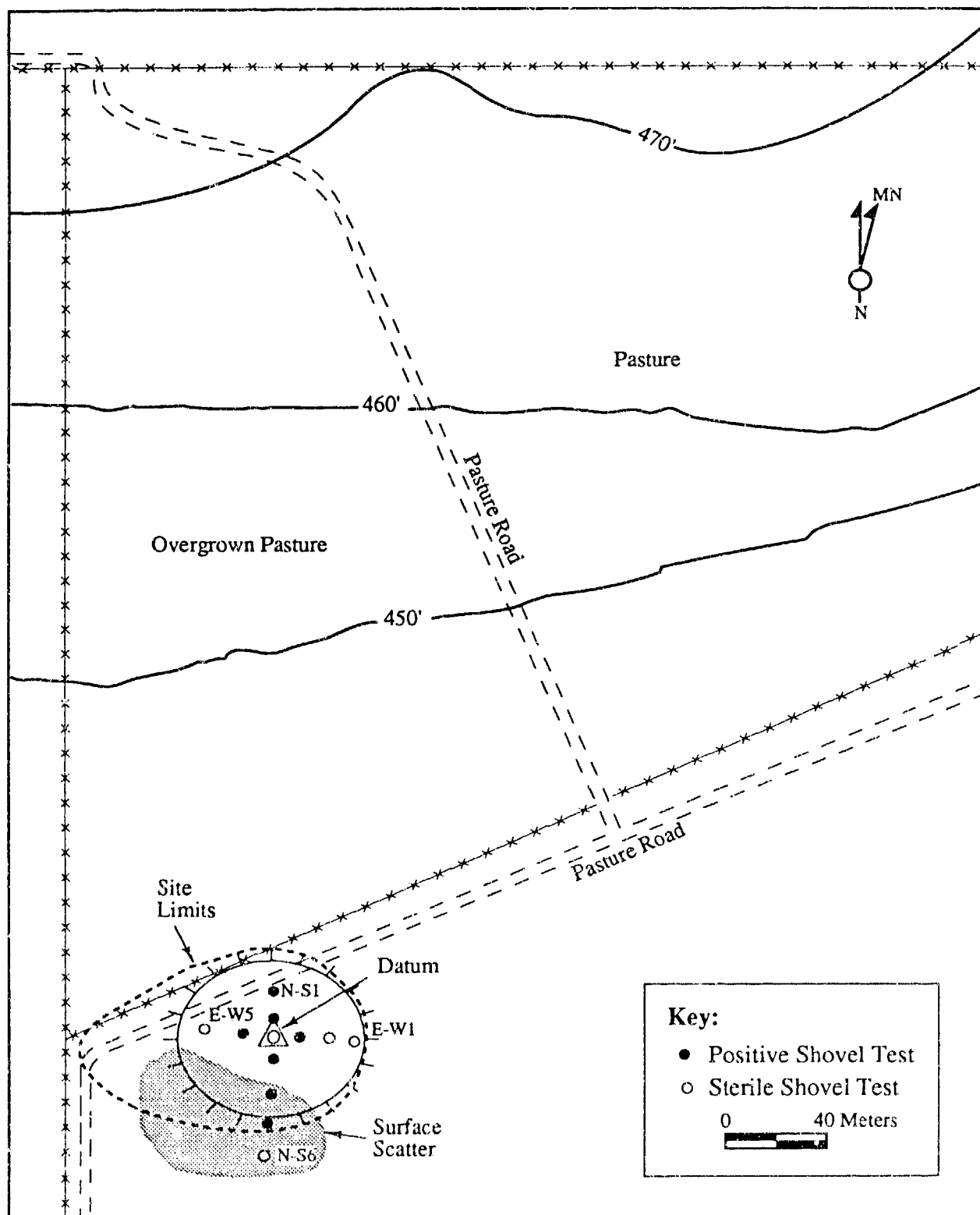


Figure 8-55. Plan of site 41DT21, showing location of shovel tests, surface artifacts, and site limits.

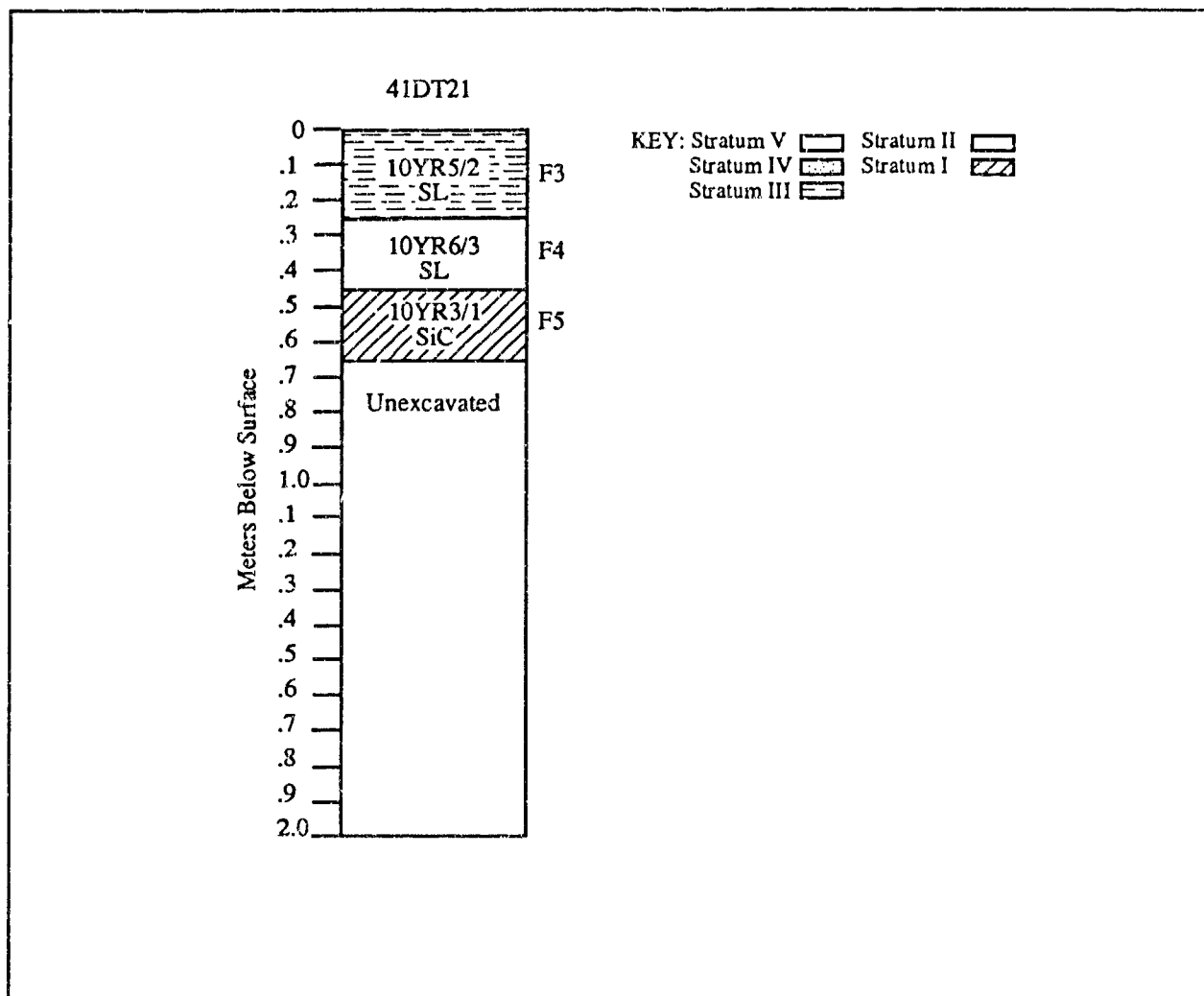


Figure 8-56. Stratigraphic profile of shovel test at site 41DT21.

exhibits no internal stratification and is devoid of pebbles, gravel, or small stone fragments. It varies in color from grayish brown (10YR5/2) to pale brown (10YR6/3). It is separated from underlying Stratum II by a clear smooth interface or boundary. Stratum III is a modern plow zone. Prehistoric artifacts recovered from Stratum III include lithic debitage, ceramic fragments, lithic tool fragments, fire-cracked rock, and bone fragments.

Archaeological Investigations

The L. O. Ray site was originally recorded as site DT1 by the Dallas Archaeological Society in 1964 (Gilmore and Hoffrichter 1964:3-15). At

that time surface collections, examinations of avocational collections, and test excavations were performed. Excavation units ranged in size from 3 ft x 3 ft (n=2) to 4 ft x 4 ft (n=2) to 5 ft x 5 ft (n=1). The artifact assemblage recovered from surface and subsurface contexts consisted of ca. 374 items, including 291 pottery fragments, 44 projectile points (28 darts, 45 arrows, one miscellaneous), two drills, eight retouched flakes, 13 bifaces, five groundstones, four bone tools, four antler punches, two bones, and one mussel shell. Stick-impressed daub was also noted. The landowner, L. O. Ray, also collected a polished celt.

The larger dart points were found generally deeper than the pottery, suggesting an initial

Archaic occupation. Alba-like points, as well as Crockett Curvilinear Incised and Pennington-like sherds, indicated a Gibson cultural association. A few shell-tempered sherds and a Perdiz point suggested a brief Fulton occupation (Gilmore and Hoffrichter 1964:15). In 1964, the owner indicated that the low rise on which the site was located had been substantially reduced by cultivation. There were no definitive features identified.

When revisited in 1970, the L. O. Ray site (if 41DT21 is actually the same) was described as a 50 m diameter scatter which contained fire-cracked rock, sherds, burned bone, and one Gary dart point. A burial was reported from this site. In 1970, a small surface collection consisting of 33 artifacts was recovered and a midden was identified. Fire-cracked rock composed 70% of the sample, followed by three flakes (9%), two cores (6%), and a dart point (3%). A pitted stone, a mano, and two pieces of pottery rounded out the assemblage. One of the sherds was incised.

Fieldwork conducted in 1989 under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey and surface collections. The single shovel test (35 cm x 35 cm x 15 cm) excavated for the site datum was culturally sterile (see Figure 8-55). Two flakes and two fire-cracked rocks were collected from eroded areas at the site. The site appeared on this evidence to be a low-density scatter covering 1,600 m² of this landform. A second, more intensive phase of test excavations was conducted in March 1991.

Prehistoric feature remains were indicated within the site locus by concentrations of the more durable feature components such as fire-cracked rock, stone tool debitage, ceramic fragments, and small bone fragments. These concentrations presumably represent cultural features that have been deflated by Historic and modern period agricultural activities. These activities have extensively modified the aboriginal landforms and ground surface.

As noted above, site 41DT21 was thought to be the L. O. Ray site. Local informants have indicated that this property is the L. O. Ray farm, and that the site locus was at least in the vicinity of the area tested under Delivery Order 7.

However, since the present survey did not encounter any evidence of the midden reported by Gilmore and Hoffrichter in 1964 and by Skinner in 1970, the possibility exists that the tested locality is not the L. O. Ray site. On the other hand, the extensive modifications to the landscape that have occurred since 1964 may have destroyed the L. O. Ray site deposits.

The additional shovel testing undertaken at site 41DT21 defined three natural strata (see Figure 8-56). Aboriginal cultural resources recovered from the site during our excavations consists of some 71 items, including the distal portion of a drill (a bifacially modified primary core trimming flake), ceramic fragments, and small bone fragments. These prehistoric artifacts most likely reflect generalized aboriginal activity including the manufacture and/or refurbishing of stone tools that represent all phases in the lithic reduction sequence. The distribution of flaked stone artifacts from 41DT21 is presented in Table 8-10. The temporal provenance and cultural affinities of this material are unknown. All aboriginal artifacts were recovered from the surface or within uppermost Stratum III; no aboriginal artifacts were recovered from undisturbed strata.

Recommendations

Based upon pedestrian reconnaissance, subsurface testing and diversity of the artifactual assemblage, it is our opinion that potentially significant prehistoric cultural resources may at one time have been preserved at this site locus. However, the diffuse character of the artifact concentration, coupled with the readily apparent disturbance of surface and subsurface site integrity, indicates that we can no longer assume the excavation and recovery of the remaining artifact assemblage would yield significant information (especially in view of the financial resources that would be necessary to secure such information). The site is classified as Category II, nevertheless, since there still remains some question of whether it is indeed the L. O. Ray site. If this locality is in fact the L. O. Ray site, it is possible that burials may still be present.

TABLE 8-10

Distribution of Flaked Stone Artifacts from 41DT21, Delivery Order Number 7 Study Area,
by Excavation Unit, Arbitrary Level, Raw Material Type, and Artifact Technotype

Excavation Unit	Stratum	Level	Cores and Core Fragments	Primary Core Trimming Flakes	Secondary Core Trimming Flakes	Tertiary Core Trimming Flakes	Bifaces and Biface Fragments	Primary Biface Thinning Flakes	Secondary Biface Thinning Flakes	Tertiary Biface Thinning Flakes	Projectile Points/Point Fragments	Specialized Implements	Non-Diagnostic Shatter	Total
N-S LINE														
Probe 1	III	0-10 cm	—	—	—	—	1 ^a	1	1	1	—	—	—	4
	III	10-20 cm	—	—	—	—	2 ^b	2	—	2	—	—	1	7
Probe 2	III	0-10 cm	—	—	—	—	—	1	—	1	—	—	—	2
Probe 3	III	0-10 cm	—	—	—	—	—	—	—	1	—	—	—	1
Probe 4	III	0-10 cm	—	—	—	—	—	—	—	1	—	—	—	1
Probe 5	III	0-10 cm	—	4	2	—	—	4	—	1	—	1 ^c	2	14
	III	10-20 cm	—	—	—	—	—	4	—	2	—	—	5	11
E-W LINE														
Probe 3	III	0-10 cm	—	—	—	—	—	—	—	1	—	—	1	2
Probe 4	III	0-10 cm	—	—	—	—	—	1	—	—	—	—	—	1
General Collection	Surface	—	1	—	—	—	3	1	4	—	—	—	—9	
SUBTOTAL: RAW MATERIALS														
Fine-grained ^d		N	—	4	2	—	3	14	2	14	—	1	5	45
Ogallala Quartzite		%	—	8.9	4.4	—	6.7	31.1	4.4	31.1	—	2.2	11.1	100.0
Medium-grained ^d		N	—	1	—	—	—	2	—	—	—	—	4	7
Ogallala Quartzite		%	—	14.3	—	—	—	28.6	—	—	—	—	57.1	100.0
TOTAL			—	5	2	—	3	16	2	14	—	1	9	52
PERCENT OF TOTAL			—	9.6	3.8	—	5.8	30.8	3.8	26.9	—	1.9	17.3	100.0

a initial edged biface

b one primary thinned biface fragment, and one tertiary thinned biface fragment

c bifacially modified primary core trimming flake

d see discussion of raw material for 41HP159

NOTE: Two formed tools and two pieces of debitage show utilization. One piece of debitage shows thermal alteration.

Site 41DT26

This previously recorded prehistoric site (Figure 8-57) was recorded by SMU in 1970. It is located on a slope at the eastern end of a terrace, 130 m (426.4 ft) west of Johns Creek and 100 m (328 ft) south of the railroad bridge over Johns Creek. Elevation at the site is 139 m (456 ft) above msl, and the mapped soil types are Normangee clay loam and Crockett loam.

In its native state, the 41DT26 site area was a post oak savannah.

Stratigraphy

A single natural soil stratum was identified at site 41DT26. It is a grayish brown (10YR4/2) silty clay loam that has many fallow field roots in its upper reaches. The only artifacts from the site were recovered on the surface of this stratum.

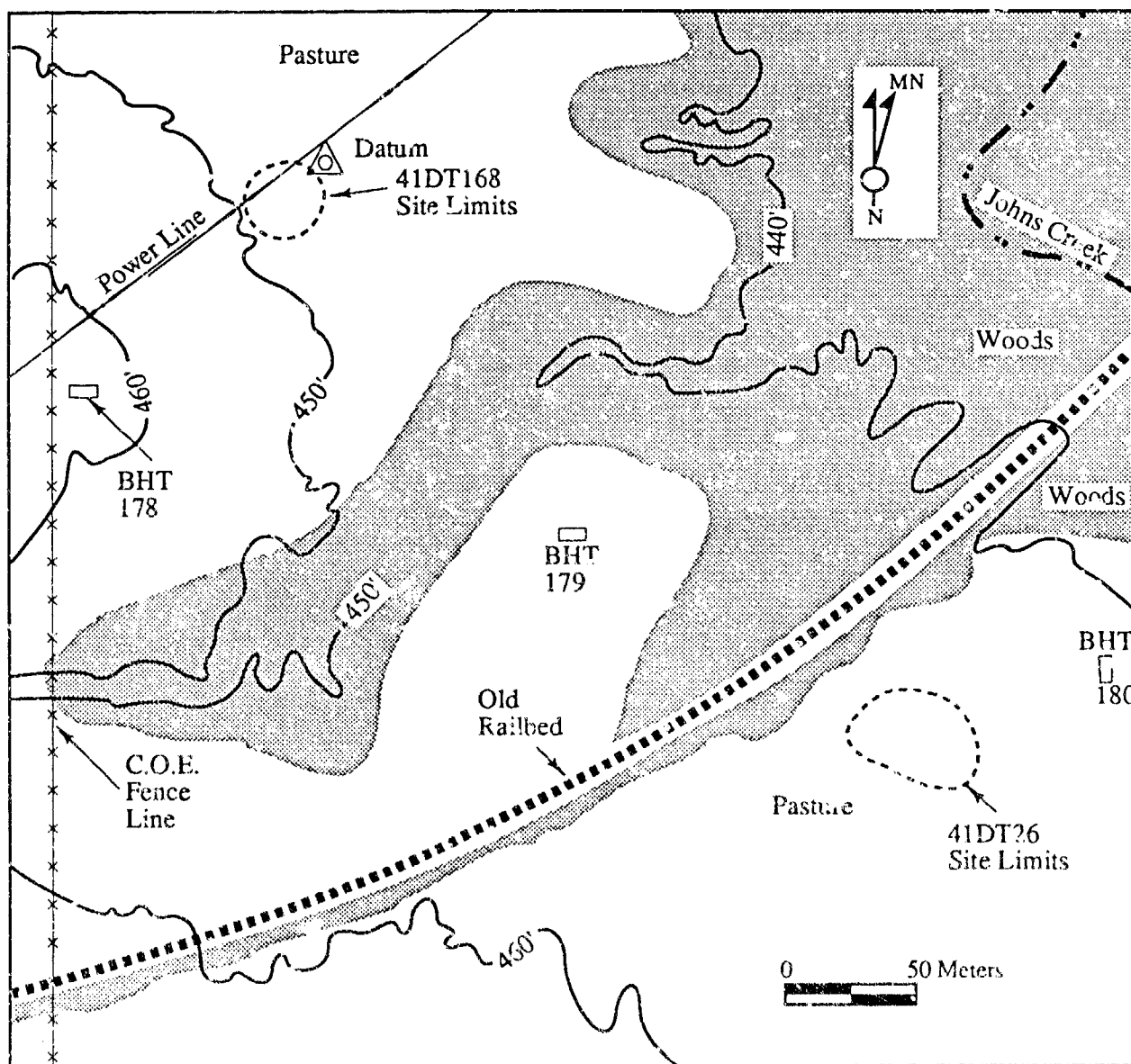


Figure 8-57. Plan of site 41DT26, showing locations of site limits (as defined by surface artifacts), site 41DT168, and BHTs 178 and 179.

Archaeological Investigations

In 1970, a lithic scatter was observed in eroded areas at the site. At that time, a surface collection of 100 artifacts was made. Flakes ($n=80$) comprised the majority of the remains, followed by fire-cracked rock ($n=13$). Fine retouched pieces, a core, and a biface rounded out the assemblage. All lithic materials were Ogallala quartzite. Since the site was so extensively eroded, no further work was recommended.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit. A total of 12 whole flakes, 22 broken flakes, four utilized flakes, one core, six pieces of shatter, fire-cracked rock, and one whiteware sherd (historic) were collected. A backhoe trench was placed in an area of the site thought to extend downslope. This unit (BHT 180) and four others along Johns Creek were sterile (see Chapter 6, this report).

Recommendations

Due to impacts caused by the railroad and continued erosion of this upland location, the integrity of this site is poor. The site is deemed clearly not eligible (Category III) for nomination to the National Register because there are no temporal or cultural diagnostics present and the diffuse, low-density artifact assemblage is not sufficient to address the material culture and settlement patterning questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT27

This prehistoric site (see Figure 8-52) was originally recorded as X41DT14 by SMU in 1970. It is situated on a floodplain/slope, 110 m (360.8 ft) south of Honey Creek and 200 m (656 ft) southeast of the Free Hope Church site.

Elevation at the site is 133 m (437 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was a post oak savannah with floodplain forest in low lying areas.

Stratigraphy

The landform containing site 41DT27 consists of a series of small mounds, frequently referred to as pimple mounds, with depressions and erosional areas between them. A single soil stratum was identified at site 41DT27. This is a light yellowish brown (10YR6/4) silty clay loam that is continuous across the site. All artifacts were recovered from the surface of this stratum, which appears to be an eroded B soil horizon.

Archaeological Investigations

In 1970, site 41DT27 was described as a small (20 m²) lithic scatter, which had been eroded. No further investigations were recommended at that time. Surface collections yielded 84 artifacts, comprised primarily of flakes (81%). No fire-cracked rock fragments were noted. Six modified flakes (6.7%) and two bifaces (2%) rounded out the assemblage. These were primarily Ogallala quartzite, but two modified flakes were identified as "Red River Jasper." This chert is derived from the Johns Valley Shale Formation in Oklahoma and from the Red River gravel beds. It is described as medium dark gray in fresh exposures and weathering to a dark yellowish brown (Banks 1990: 122).

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey, mapping, and surface collection. The site area was larger than previously noted (1,000 m²), probably due to continued erosion. The artifact assemblage consisted of a total of 23 whole flakes, 15 broken flakes, eight utilized flakes, one marginally modified biface, one bifacial knife, one unmodified cobble, and fire-cracked rock. A single excavated shovel test (35 cm x 35 cm x 10 cm) was culturally sterile and no A soil horizon was present. Apparently disturbed by road construction, site 41DT27 may have extended west into the Friendship

Cemetery, where low-density prehistoric artifacts were also present, following the disinterment of the cemetery by the CE.

Recommendations

Site 41DT27 is of unknown prehistoric age, and represents lithic reduction and unknown processing activities. Due to the continued erosion and lack of temporally diagnostic artifacts, this site has low potential to address the material culture, chronological, and settlement patterning questions outlined in the Research Design (Category III). If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility.

Site 41DT29

This previously recorded site (see Figure 8-52) was originally designated X41DT1 by SMU in 1970. It is located on a slope 125 m (410 ft) north of Honey Creek and 370 m (1213.6 ft) northeast of the Friendship Church and Cemetery. Elevation at the site varies between 134 m (440 ft) and 136 m (445 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this area was a post oak savannah.

Stratigraphy

A large graded area, possibly used for road construction materials, was present in the northern portion of the mapped location of the site. No artifacts were noted in this graded area, where ground exposure ranged from 80-100%. This area provided continuous soil profiles across the top of the ridge. Two natural soil strata were identified at site 41DT29. These strata are described from oldest (lowest) to youngest (uppermost).

Stratum I is the basal clay, which may be Pleistocene in age. This clay is yellow (10YR7/6) in color and is continuous across the site. It has been exposed by grading and soil erosion over 50% of the site area.

Stratum II is a light yellowish brown (10YR6/4) silty clay loam. Despite its location in a fallow pasture, few roots or organic matter were present. All artifacts recovered from this site derive from the surface of this stratum.

Archaeological Investigations

When first recorded in 1970, site 41DT29 was described as a small lithic site which was eroding out of the plow zone at the western edge of the terrace. At that time 31 artifacts were collected, primarily flakes (87%). Two dart preforms (6.5%), one core (3.2%), and one fire-cracked rock (3.2%) rounded out the assemblage. Of the identified lithic materials ($n=27$), 89% was Ogallala quartzite and 11% was chert. A straight stem dart (untyped) point base and drill base are the most distinctive items in the assemblage.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, profiling of the walls of a graded area on the site's northern boundary (see Figure 8-52), and the excavation of a 35 cm x 25 cm x 15 cm shovel test (the site datum) and a 10 cm x 15 cm deep auger test. Both tests were culturally sterile, with less than 5 cm of the A-horizon remaining on the site.

The artifact assemblage from surface collections included both prehistoric and historic items. The prehistoric assemblage consisted of 10 artifacts, including four whole flakes, four broken flakes, one utilized flake, and one fire-cracked rock.

The historic artifact assemblage recorded from surface contexts at 41DT29 consisted of five items: one refined earthenware, one stoneware, two hand-made bricks, and one impacted .38 caliber bullet. The stoneware dates ca. 1875-1930 and the ironstone ca. 1840-1910. Although hand-made brick dates ca. 1850-1890 in the Cooper Lake area, it frequently is recycled on more recent sites. Artifact density at the site is low.

Recommendations

The site appears to be of Late Archaic period ascription, and its small artifact assemblage represents lithic reduction activities. The historic debris is incidental and does not reflect domestic or farming activities. Although the prehistoric materials could be important in the understanding of Late Archaic period settlement and material culture, erosion and a lack of preserved deposits detract from its potential to provide useful

information. The historic component probably represents dumping. The site is considered not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT45

This prehistoric site (Figure 8-58) was recorded as X41DT28 by SMU in 1970. It is located in a floodplain/slope setting on a west-facing terrace 140 m (459.2 ft) east of Johns Creek and 2.33 km (1.45 mi) east of FM 1880. Elevation at the site is 132.6 m (435 ft) above msl, and the mapped soil type is Crockett loam. In its native state, the site was in floodplain forest. It has been lumbered during the Historic period and was heavily cultivated until the 1970s.

Stratigraphy

Three natural strata were identified at site 41DT45. These strata are discussed in order from oldest (lowest) to youngest (uppermost). Stratum I, a residual knoll dating to the Pleistocene, is continuous across the site. The soil is a mottled yellow clay. Its upper boundary varies from 5-30 cm below ground surface. It was excavated to a maximum depth of 45 cm. This stratum was culturally sterile, although there is a potential that cultural features may have penetrated this stratum.

Stratum II is a silty clay that varies in depth 0-15 cm below surface. The color of this stratum ranges from light brown to dark brown. The units (Shovel Test 1 and Shovel Test 2) which encountered the dark brown silty clay were located in a wooded area, and the stratum's darker color is due to increased organic content. This stratum has no internal stratification and is separated from underlying Stratum I and overlying Stratum III (where present) by a clear, smooth interface. The majority of the site assemblage was recovered from this stratum.

Stratum III is a light brown sand that is discontinuous across the site. It was found in only two shovel probes (ST 3 and ST 5) located in a formerly plowed field. This stratum may be due

to deflation and winnowing of fine sediments, which left a sandy surface horizon. The stratum is light brown in color and contains a lower frequency of artifacts than underlying Stratum II.

Archaeological Investigations

When recorded in 1970, the site was described as an eroding natural knoll, approximately 700 m² in area. No A soil horizon was reported. Surface collections yielded 245 items, primarily flakes (79%), fire-cracked rock (13%), one dart point and 11 retouched pieces (4.9%), cores and bifaces (2.4%), and a single sand-tempered pottery sherd (0.4%). Ogallala quartzite comprised 97.5% (n=189) of the identified lithic assemblage. Two chert fragments and one piece of petrified wood round out the assemblage. The dart point was not typed.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey, mapping, surface collection, and shovel tests (see Figure 8-58). Surface collections yielded 40 artifacts over a 7,200 m² area, primarily flakes (90%) and fire-cracked rock (10%). In all, five shovel tests were excavated in March 1991 at 40 m intervals across the residual knoll which contains site 41DT45. These units ranged in size from 35 cm x 35 cm to 50 cm x 50 cm and in depth from 30 cm to 45 cm below ground surface.

Shovel Test 1, located in a densely wooded area of the site yielded the highest density of artifacts (24 flakes, one fire-cracked rock, two hematite or ochre pieces) from 0-25 cm below surface. This unit was excavated 15 cm into sterile subsoil. Shovel Test 2 was located in a bulldozer swath adjacent to a burned brush pile which left an earthen mound. Shovel Test 2 yielded two flakes in the remnant of Stratum II which was enriched with organic matter from the remaining forest area (second growth). This unit was excavated 15 cm into sterile subsoil (Stratum I). Shovel Test 3 yielded a total of 23 artifacts, 10 of which (eight flakes and two fire-cracked rocks) were in the sandy plow zone (0-15 cm below ground surface).

The remaining artifacts (three flakes, nine fire-cracked rocks, and one unmodified cobble) were recovered from the surface of Stratum II.

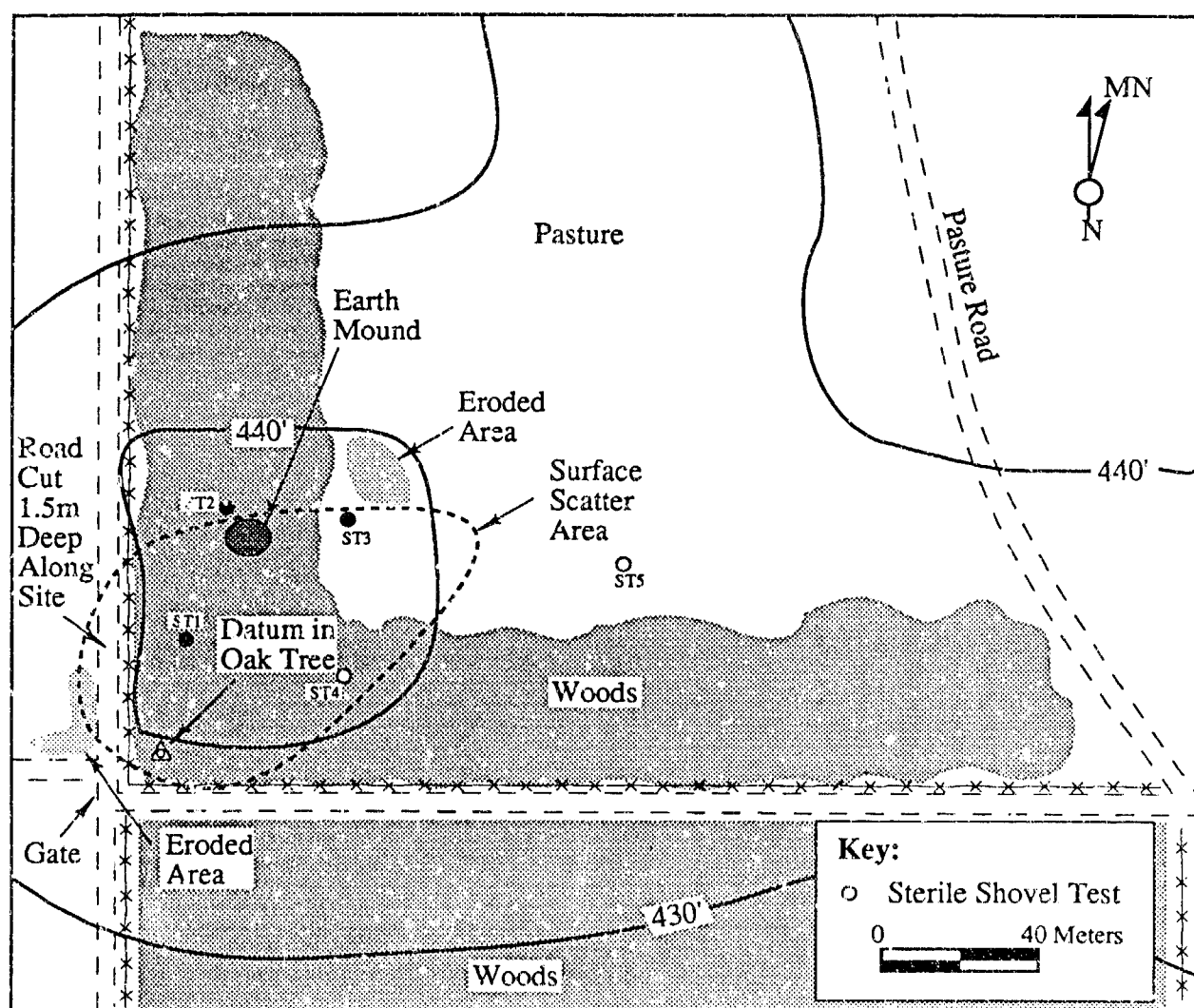


Figure 8-58. Plan of site 41DT45, showing locations of shovel tests, surface artifacts, and aboveground disturbances.

The distinct layering effect of these latter artifacts may be due to the intensive plowing which occurred in this area of the site in the past. Shovel Test 4 yielded only two flakes in the surface soil horizon (Stratum II). Shovel Test 5 was culturally sterile. All flaked stone materials and fire-cracked rock were Ogallala quartzite.

Recommendations

The lack of any reliable cultural or chronologically diagnostic artifacts prevents firm identification of the site context. The site function is interpreted as an open camp. The dart point and ceramic sherd from earlier investigations indicate

Late Archaic and Late Prehistoric site use. Due to the relatively high density of artifacts and potential for subsurface features, further evaluations may be necessary to determine the site's National Register eligibility (Category II). Additional investigations are likely to yield temporal diagnostics and may indicate some stratification or separation of components. Subsurface features are also potentially present.

Site 41DT46

This prehistoric site (Figure 3-59) was recorded as X41DT29 by SMU in 1970. It is located on a west-facing slope/upland setting,

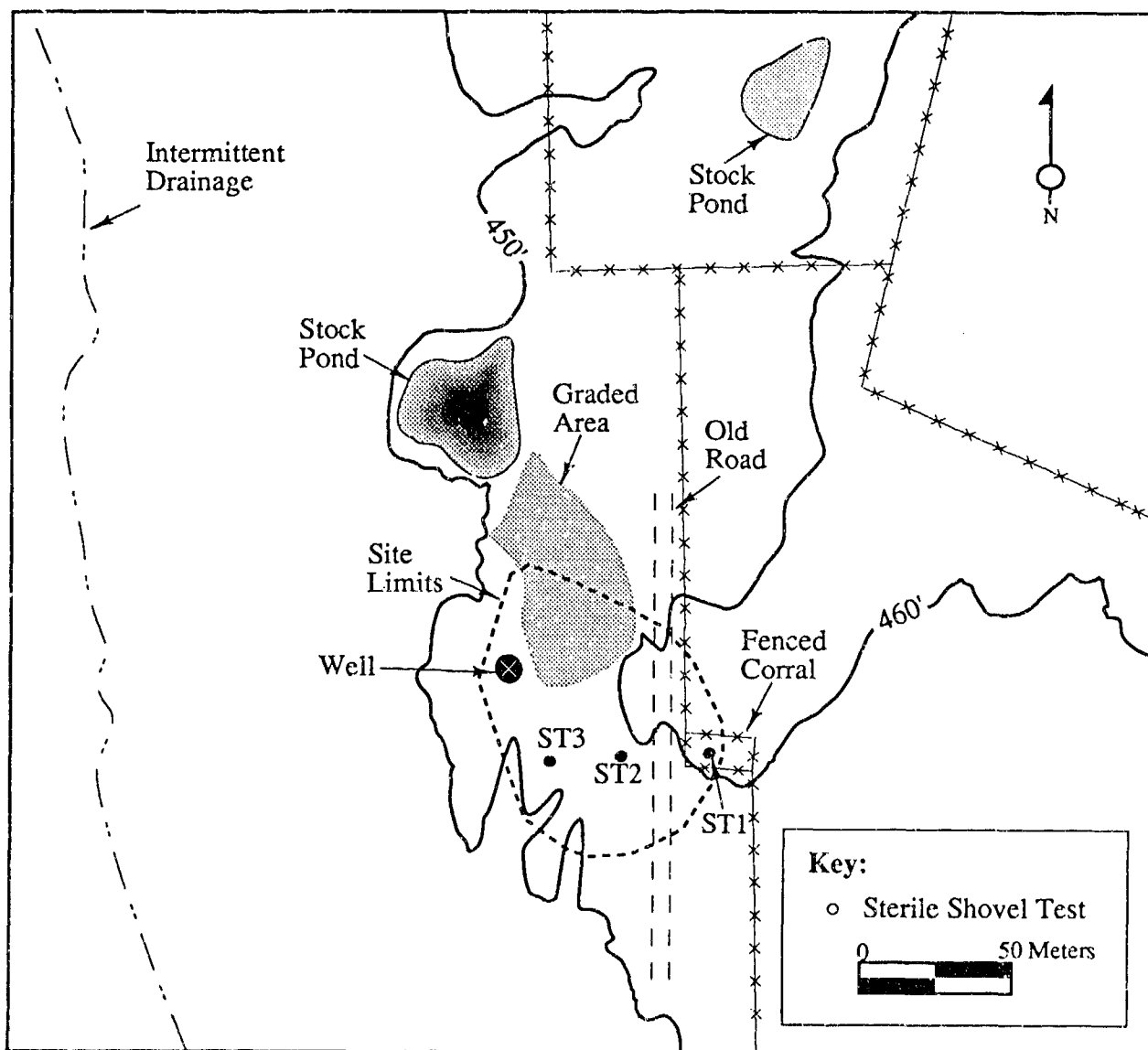


Figure 8-59. Plan of site 41DT46, showing the locations of shovel tests, surface artifacts, site limits (as defined by surface artifacts and positive shovel tests), and aboveground disturbances.

300 m (984 ft) east of Johns Creek and 750 m (2,460 ft) southeast of the FM 1528 bridge over Johns Creek. Elevation at the site varies between 137 m (445 ft) and 140 m (460 ft) above msl, and the mapped soil types are Normangee clay loam and Crockett loam. In its native state, this area was post oak savannah bordering upland prairie.

Stratigraphy

Two natural soil strata were identified at this site. They are discussed below from older (lower)

to younger (upper). Stratum I is horizontally continuous across the upland landform. This is a mottled brown clay which is culturally sterile, except where cattle traffic has trampled surface artifacts into this subsoil. The upper boundary is encountered 0-10 cm below surface, and the stratum was excavated to 30 cm below surface.

Stratum II is discontinuous across the site due to extensive erosion. This is a brown silty clay with occasional mottles and low organic content. The lower boundary of this stratum is diffuse and varies from 7-10 cm below surface.

Archaeological Investigations

In 1970, a surface collection yielded 217 artifacts. Flakes (77%) were the most abundant artifact class, followed by fire-cracked rock (12.4%). Eleven retouched flakes and one dart point preform comprised the remainder of the assemblage. All lithic materials were Ogallala quartzite.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, shovel testing, and photography in this unit (see Figure 8-59). When revisited in 1989, artifacts were surface collected. A total of 31 whole flakes, 61 broken flakes, five utilized flakes, 24 pieces of shatter, two cores, a core fragment, fire-cracked rock, and an Edgewood dart point (Figure 8-60) were collected from the site. Two historic artifacts, a lead gun pellet and a green glazed stoneware dating to ca. 1840-1910 were recovered as well.

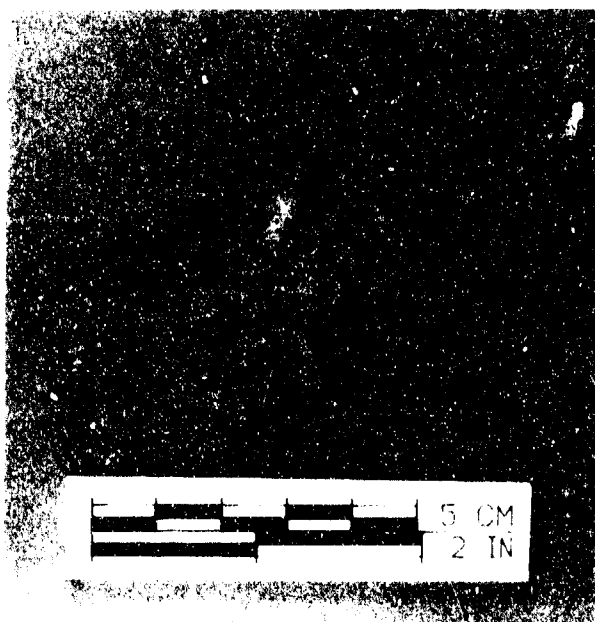


Figure 8-60. Projectile point from site 41DT46, Delivery Order Number 7 study area: Edgewood dart point (surface).

The shovel testing program was conducted in March 1991 and was limited to excavation of three units at 20 m intervals in relatively undisturbed portions of the site. These units ranged in size from 30 x 30 cm to 50 cm x 50 cm and were excavated 20-30 cm below ground surface. The excavated artifact assemblage consisted of 25 artifacts, all recovered ca. 0-21 cm below surface. Shovel Test 2 produced the most material (19 flakes and three expended cores). Shovel Test 1, excavated in the cattle corral (see Figure 3-59), yielded two flakes, and Shovel Test 3 yielded one flake. All flaked artifacts were Ogallala quartzite.

Recommendations

Occupation of the site dates to the Late Archaic period, and the assemblage represents lithic reduction and camping activities. Due to the topographic position of this site, there has been no soil aggradation. The construction of a stock tank and vehicular traffic along the fence line has caused extensive erosion. Based on this, the site has low archaeological integrity. Since there are no faunal or floral remains, the site has low potential to address the prehistoric subsistence questions outlined in the Research Design, despite a relatively high density of lithic debris on the ground surface. The site is deemed clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT51 (Garbage Dump Site)

This site (Figure 8-61) was recorded as X41DT35 by SMU in 1970. It is located in a slope/upland setting on a remnant knoll, 160 m (524.8 ft) north of the South Sulphur River and 350 m (1,148 ft) west of FM 1880. Elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this was a post oak savannah.

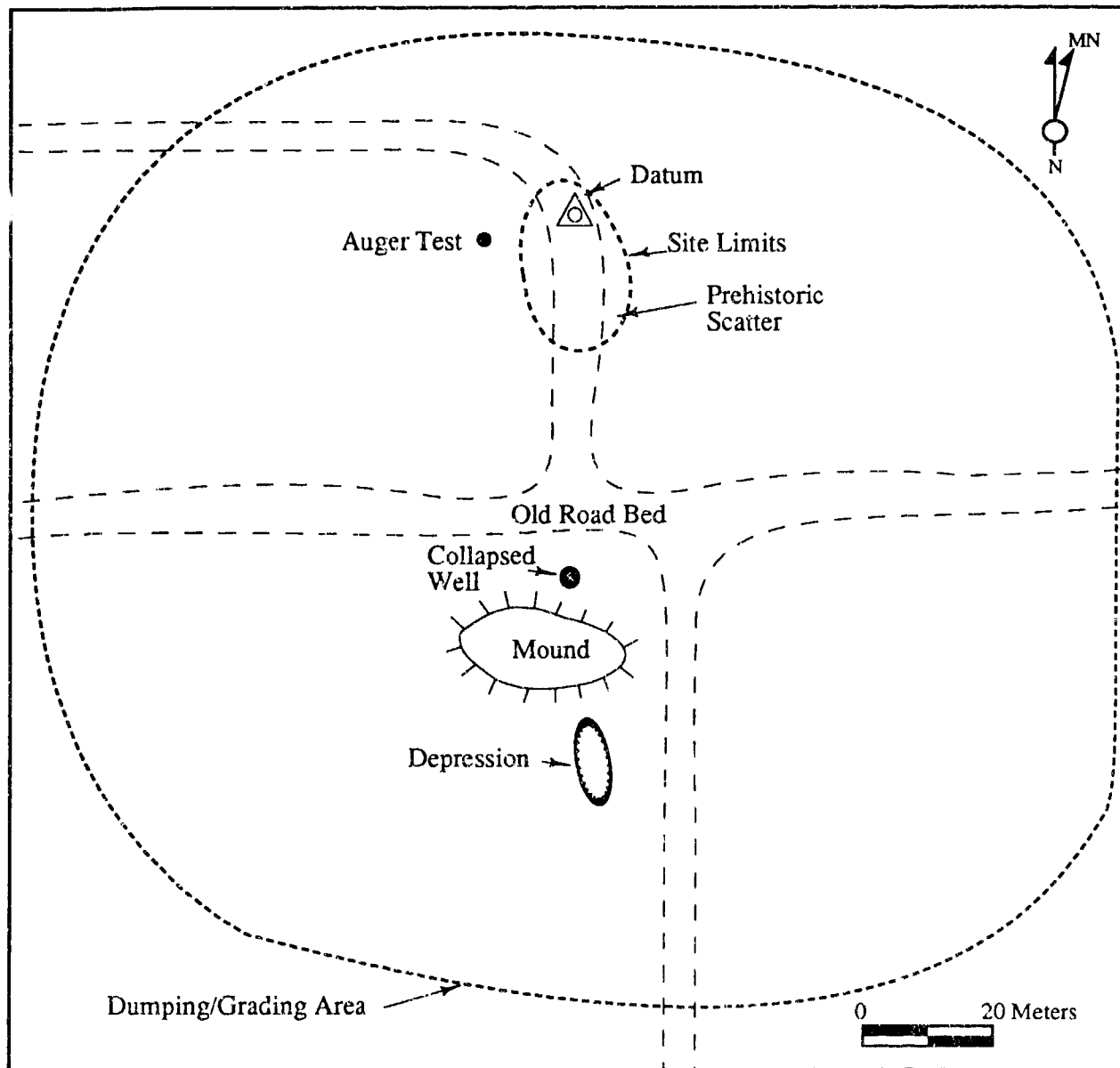


Figure 8-61. Plan of site 41DT51, showing locations of surface artifacts, site datum, auger test, site limits, aboveground features, and land disturbances.

Stratigraphy

Three natural soil strata were identified in the vicinity of site 41DT51 during geomorphic investigations in 1986. Backhoe Trench 35, reported in Bousman, Collins, and Pertulla (1988: 123-124), was excavated ca. 500 m (1,640 ft) to the northeast, in the same geomorphic setting and at the same elevation. The strata identified in that unit are discussed in order from the oldest (lowest)

to youngest (uppermost).

Stratum I is a light gray (5Y7/2) clay with yellowish brown (10YR5/8) mottles. Manganese concretions are abundant, and this appears to be the parent material for the soil. It has a gradual upper boundary at 1.75 m below surface and was excavated 2 m below ground surface. It is culturally sterile.

Stratum II is a light gray (5Y7/2) clay with many manganese concretions. It is a C soil

horizon. It has a gradual upper boundary at 40 cm below surface, and is culturally sterile.

Stratum III is a dark gray (2.5Y4/0) clay loam that is discontinuous over 50% of the site area at 41DT51. This surface soil horizon contains both prehistoric and historic cultural materials.

Archival Information

A house is shown in the vicinity of the site on the 1914-1915 map of the area. Site 41DT51 is located on the J. Zunega (A-100) Survey. This 932 ha (2,302 acre) tract was patented by John Gregg in 1857 (Delta County Deed Book 2-H: 191). In 1936-1937, this site was located on one of two 18.2 ha (45 acre) tracts belonging to H. H. Hagood. At that time, Tract 1 (which contains site 41DT51) had 0.8 ha (2 acres) reserved for the home, 16.6 ha (41 acres) in cultivation (2.8 ha [7 acres] in grain and 13.8 ha [34 acres] in cotton), and 8.1 ha (20 acres) of wasteland. Hagood bought the property for \$5.00 in 1929 (Delta County Deed Book 74: 172). He leased it to tenants. A 32 ft x 36 ft dwelling and a 16 ft x 22 ft barn were present.

Archaeological Investigations

In 1970, site 41DT51 was described as a small, shallow (less than 30 cm deep) site that had received impacts from the excavation and removal of soil. Surface collections yielded only seven artifacts, including three flakes, two bifaces, one dart point, and one retouched piece. All were Ogallala quartzite.

Site 41DT51 was revisited in 1976, when dumping and bulldozing of refuse had already encompassed the site area. No temporally diagnostic artifacts were recovered, and the "Archaic" designation could not be confirmed. No further work was recommended at that time.

Fieldwork conducted under the terms of Delivery Order Number 7 included pedestrian survey at 20 m intervals. The entire area surrounding the site is still being used for refuse dumping, and the entire landscape has been modified (see Figure 8-61). Surface collections yielded three Ogallala quartzite flakes. The historic component at the site is represented by a cistern lined with machine-made brick, located east of the

lithic scatter. A collapsed storm cellar is located 20 m south of the cistern. Boards, sheet metal, and machine-made brick are scattered in this area. Stoneware, glass, and an iron hook were collected from this part of the site as well.

The prehistoric component did not yield culturally or temporally diagnostic artifacts and at most represents camp and lithic reduction activities. Historic occupation of the site dates to the early twentieth century.

Recommendations

The site is considered to be clearly not eligible (Category III) for the National Register. Archival and informant researches do not indicate any historical significance for the property. The prehistoric materials are too dispersed and disturbed to yield reliable information relevant to the subsistence, material culture, and settlement questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT52 (Luna Site)

This prehistoric site (Figure 8-62) was initially recorded as X41DT36 by SMU in 1970. It is located on a ridge crest known as Lost Ridge, 500 m (1,640 ft) north of the South Sulphur River and 600 m (1,968 ft) south of the channelized Middle Sulphur River. Elevation at the site is from 135-137 m (442-448 ft) above msl, and the mapped soil type is Annona loam. In its native state, this was an oak forest surrounded by floodplain forest consisting of mixed hardwoods.

Stratigraphy

Six natural strata were identified by Bousman and Collins during extensive geomorphic investigations at site 41DT52 in 1986 (Bousman, Collins, and Perttula 1988:117-118). The strata in Shovel Test 1 and Backhoe Trench 14 from those investigations are discussed below from oldest (lowest) to youngest (uppermost).

Stratum I is a yellow (10YR8/6) sandy loam with medium light gray (5Y7/2) mottles. This

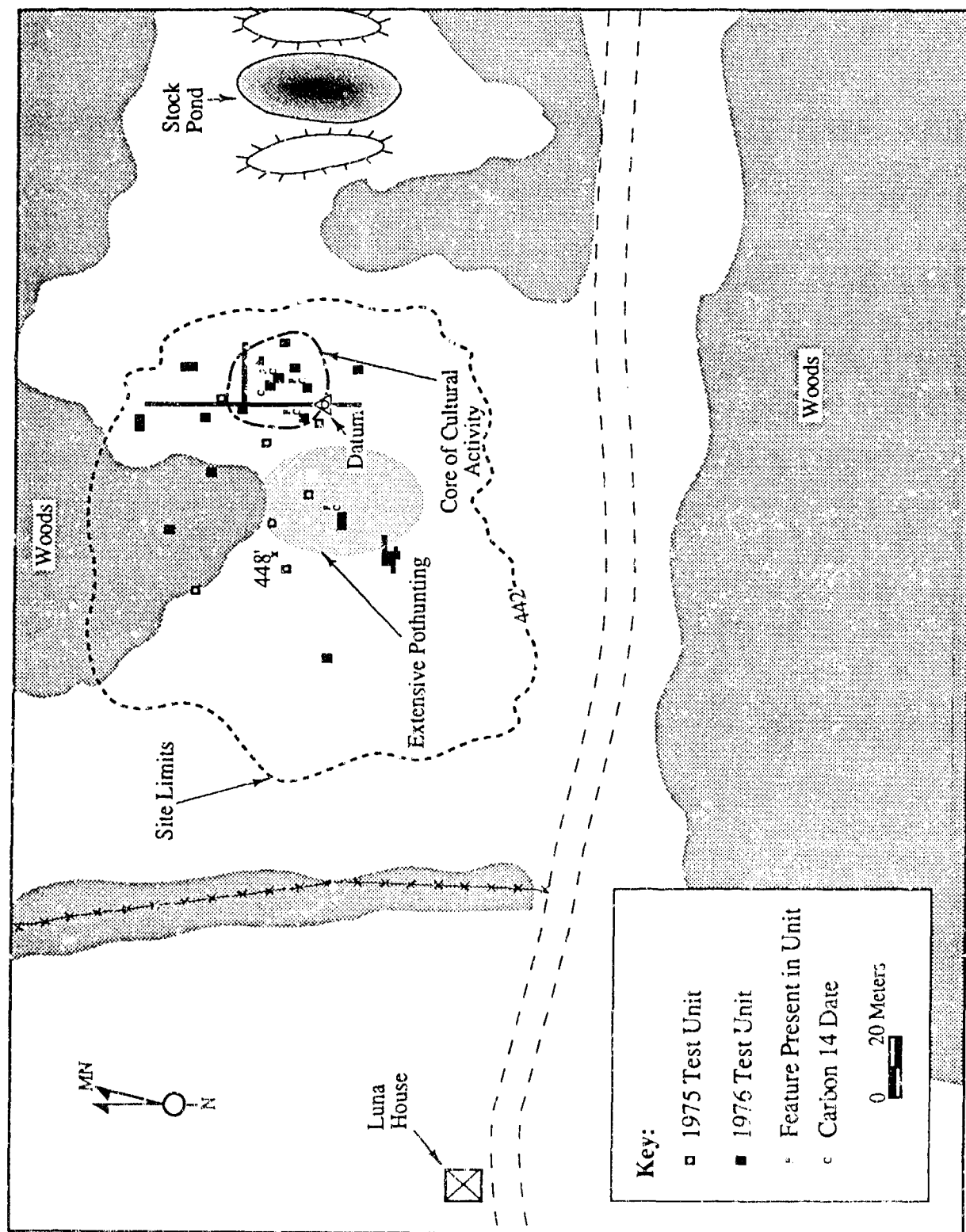


Figure 8-62. Plan of site 41DT52, showing locations of excavation units from previous investigations, cultural features, site limits, and above-ground disturbances.

was the basal stratum in the site area, but varied in color and composition in Backhoe Trenches 12, 13, and 14. Stratum I has manganese concretions, and calcium carbonate films on ped faces. It is culturally sterile with a gradual upper boundary at 2.15 m below ground surface. It was excavated to a maximum depth of 2.5 m below ground surface.

Stratum II is a grayish orange (10YR7/4) sandy loam. It has a gradual upper boundary at 85 cm. It is culturally sterile.

Stratum III is a light brown (5YR5/6) to dark yellowish orange (10YR6/6) clay loam. It has a gradual upper boundary at 60 cm below ground surface and is culturally sterile.

Stratum IV is a light brown (5YR5/6) clay loam with olive gray (5Y5/2) mottling. Manganese concretions are common. It has a gradual upper boundary at 35 cm below ground surface and is culturally sterile.

Stratum V is a moderate brown (5YR4/4) silty clay loam with abundant roots and charcoal. This is the lower prehistoric midden at site 41DT52 and contains abundant flakes, fire-cracked rock, and some bone. It has a gradual upper boundary at 20 cm below ground surface and is classified as a B soil horizon.

Stratum VI is a grayish brown (5YR3/2) sandy loam with abundant fallow field roots and charcoal. It is the upper prehistoric midden at the site with abundant flakes, fire-cracked rock, and some bone. This stratum is classified as an Ap-horizon and has been intensively cultivated in the past.

Archaeological Investigations

When recorded in 1970, 41DT52 was described as a large remnant knoll at the end of Lost Ridge, with erosion along the eastern and southern portions of the site. At that time it was interpreted as a multicomponent Archaic/Caddo site that served as both temporary camps and base camps. An uncontrolled surface collection in 1970 yielded an assemblage of 304 artifacts. The assemblage was dominated by flakes (50%) and fire-cracked rock (29%). The third most common category was lithic tools (9.5%), including two darts, two dart preforms, one arrow point, one arrow point preform, and 23 retouched pieces. Cores and bifaces comprised the fourth most

common artifact category (7.2%). Pottery (2.3%) and ground stone (1.64%) rounded out the assemblage. Ogallala quartzite comprised the dominant lithic type, with only one piece of petrified wood and two chert flakes. Both of the dart points were classified as Gary. The arrows were not typed. The seven ceramics were plain, grog- and sand-tempered sherds ranging from 0.5-0.9 mm in thickness.

In 1975 and 1976, more-intensive investigations were conducted at 41DT52 (see Figure 8-62). Testing was performed in 1975 to determine site function, and consisted of seven 2 m x 2 m units excavated in arbitrary 5 cm levels to sterile clay (ranging from 20 cm below surface on the crest to 60 cm below surface on the east slope). Neither cultural nor natural stratigraphy was evident (Doehner, Peter, and Skinner 1978: 101). The fill was not screened. A single arrow point and ceramics were recovered, but no charcoal or cultural features were noted. Faunal remains were only in the upper 5 cm and were attributed to historic activities on the site. Further testing was recommended in an interim report (Doehner and Larson 1975).

In 1976, further work was conducted, focusing on exposing greater surface area, searching for subsurface cultural features, and increasing the assemblage sample (Doehner, Peter, and Skinner 1978:101). Twenty-one 2 m x 2 m units were excavated in 10 cm arbitrary levels, even though no cultural or natural stratigraphy had been demonstrated by the test excavations. The fill was screened through a 0.25 inch screen. Two units were selected for water screening, and a 1 m x 1 m quadrant of selected 2 m x 2 m squares was processed. Excavations focused on the eastern portion of the site (with 14 2-m x 2-m units). A series of trenches was excavated by backhoe to explore for features (Doehner, Peter, and Skinner 1978: 102, Figure 11). No artifacts or features were discovered in the trenches.

The excavations yielded 31,007 artifacts, 24,365 (78.6%) of which were from the midden on the eastern portion of the site. Three cultural features in addition to the midden deposit were also revealed (Doehner, Peter, and Skinner 1978:103-104). An 80 cm x 50 cm x 25 cm fire pit (Feature 21a) was located in Unit 21, 18 cm below ground surface. A 1 m diameter fire pit

(Feature 31a) 20 cm below surface was located in Unit 31. The third feature (Feature 15), a possible trash pit (130 cm in diameter and 10-20 cm deep), was identified in Unit 15. Samples were radiocarbon dated for these three features, and for the midden deposit in two additional units (i.e., Unit 30, 30-40 cm below surface and Unit 19, 20-30 cm below surface). Dendrocalibrated dates of these samples (from oldest to youngest by site provenience) include: F15(?) in TP15(?), A.D. 712 ± 161 (SMU-476); F21a in TP21, A.D. 1082 ± 76 (SMU-396); TP30, A.D. 1332 ± 36 (SMU-404); TP19, 20-30 cm below ground surface, A.D. 1572 ± 46 (SMU-471); and F31a in TP31, A.D. 1797 ± 77 (SMU-417).

The lithic assemblage selected for analysis in 1976 included 31,007 items (Doehner, Peter, and Skinner 1978:115-124). This assemblage was dominated by fire-cracked rock (49%) and lithic debris (45.7%). Ceramics (3%), bifaces (0.9%), retouched pieces (0.4%), and cores (0.3%) comprised the next most frequent artifact categories. Arrow points ($n=62$; 0.2%) dart points ($n=44$; 0.1%), endscrapers ($n=11$; 0.03%), hammerstones ($n=11$; 0.03%), graters ($n=7$; 0.02%), pitted stones ($n=4$; 0.01%), drills ($n=2$; 0.006%), and ground stone ($n=2$; 0.006%) rounded out the lithic assemblage. In addition, 15 bone tools were recovered, including three ulna awls, three needles, one metapodial (deer) puncher, four modified bone fragments, one bone bead, two decorated items, and one possible gaming piece.

The identified ceramic assemblage consisted of 940 sherds, 595 of which were too fragmentary to be classified (Doehner, Peter, and Skinner 1978:124-125). Grit/grog-tempered pottery (with some bone and/or shell) was represented by 316 sherds, ranging in thickness from 5-15 mm. These ceramics were plain, with some smoothing.

Grit/grog-tempered pottery without bone and/or shell was represented by 119 sherds. These were generally higher fired, with more surface smoothing than the grit/grog-tempered specimens with bone/shell. Thirty-eight body sherds were decorated with straight, incised lines. Eleven sherds were brushed. One fingernail-incised sherd may ascribe to the Dunkin Incised type. One sherd had reed punctates.

Faunal remains consisted of 438 identifiable

fragments and 8,821 unidentifiable fragments. White-tailed deer comprised 78% of the identified remains. Pocket gopher (5%), pronghorn antelope (4.6%), cottontail rabbit (4.1%), and wild turkey (2.3%) comprised minor proportions of the assemblage. Fish and turtle were common in water-screened units, but were generally unidentified.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey to relocate the site and to address the pothunting damage. The site had been burned over to facilitate pothunting activities and ground exposure was excellent. A permanent datum was placed in the north-south backhoe trench in the eastern portion of the site, at the edge of the midden deposit (see Figure 3-62). Since extensive excavations had been performed in the past, and pothunter's holes and surface exposure were sufficient to reconfirm the site area and depth, no shovel tests were performed in 1989.

Additional work conducted under the terms of Delivery Order Number 7 included reexamination of the lithic and floral assemblages from site 41DT52, which had not been systematically studied previously (see Appendices A, B, and D, this report). Only those fragments of sufficient size and completeness were selected for analyses, so the specific counts of categories may not match those reported in Doehner, Peter, and Skinner (1978).

The projectile point assemblage ($n=99$) was evenly divided between darts ($n=51$) and arrows ($n=48$). In all, seven dart types were identified. The dominant dart type was Gary, which comprised 80% of the dart assemblage. The Morrili and Yarbrough types each comprised 6% of the assemblage, followed by Kent and Dawson (4% each) and Edgewood (2%).

In all, 13 arrow point types were identified. The dominant arrow type was Alba (27%), followed by Catahoula (16%), Bonham (12.5%), and Perdiz (12.5%). Other types included Colbert (8%), Hayes (4%), Steiner (4%), Talco (4%), Basset (2%), Clifton (2%), Edwards (2%), Fresno (2%), and Young (2%).

Twenty-four previously unidentified botanical samples which were from water-screened (0.125 inch screen) units were identified. Only a small

amount of carbonized plant remains were recovered; the majority of the water-screened detritus was modern seeds. Hickory nutshell comprised 45.8% of the carbonized plant remains. One sample contained *Psoralea* sp. tuber fragments.

In 1989, the site was revisited on numerous occasions and evidence of extensive looting was documented. Throughout the late summer and early fall of 1989, additional large potholes were dug by looters, severely impacting a 400 m² area of the site. The cut walls of several pits were examined, and the screens used by the pothunters were removed. Despite CE surveillance, official posting, and coordination with the Delta and Hopkins County Sheriff Departments, the pothunters continued to impact this site in late 1989 and early 1990. Although the exact extent of the pothole damage at the site has not been calculated, it is estimated to be in excess of \$10,000.

Recommendations

The results of the fieldwork and further analyses of previously recovered artifacts indicate that site 41DT52 is a multicomponent site with cultural materials dating from the Early to Middle Archaic periods to the Late Prehistoric period. Intact midden, hearth, and trash pit features are known to be present and have been chronometrically dated. The bulk of the occupation of the site occurred ca. A.D. 500-1600. Cultural feature F31a, dated to A.D. 1720-1874 based on cultural associations and a single radiocarbon date, could be related to historic Indian or Anglo-European use/occupation of the site. Floral analysis indicates that modern botanical remains are bioturbated throughout the deposit. Since additional subsurface features may be present, which could aid in isolating the multiple components at the site, the site is deemed eligible (Category I) for the National Register.

Site 41DT53

This prehistoric site was recorded as X41DT41 by SMU in 1970. It is located on a floodplain, 890 m (2,919.2 ft) south of the channelized Middle Sulphur River and 1.325 km

(0.82 mi) north of the South Sulphur River. Elevation at the site varies between 134 m (440 ft) and 136 m (445 ft) above msl, and the mapped soil type is Annona loam. In its native state, this area was a floodplain forest consisting of mixed hardwoods.

Stratigraphy

A single soil stratum was identified at site 41DT53. This is a grayish brown (5YR3/2) sandy loam with abundant fallow field roots. This stratum is classified as an Ap-horizon and has been intensively cultivated in the past. It was excavated to 15 cm below ground surface.

Archaeological Investigations

When site 41DT53 was recorded in 1970, it was described as an eroded and plowed area, with all materials in the plow zone. At that time 11 artifacts were surface collected, including four flakes, two dart points, two arrow points, one core, one fire-cracked rock, and one pitted stone. The dart points were typed as Gary. All lithic remains were Ogallala quartzite.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey and shovel testing in attempts to locate the site. In all, two person days were expended in this endeavor. Three 35 cm x 35 cm x 15 cm shovel tests were also excavated at the mapped location (i.e., on Lost Ridge Crest) for the site, but were sterile. One of these was used for the site datum. No artifacts were found at the site. The site may have been misplotted in 1970, or it may be a very low density site that was visible when the knoll was in cultivation. A permanent datum was established near a plywood deer blind in the mapped vicinity of the site.

Recommendations

Based on the 1970 site form and artifacts, the site is a Late Archaic period to Late Prehistoric period site. Since site 41DT53 yielded only 11 items when it was plowed in 1970, it obviously contains low-density deposits. Our field investigations failed to determine site boundaries, but confirmed the low-density nature of this

eroded landform. The site is thought to be clearly not eligible (Category III) for nomination to the National Register because the artifact assemblage is too small to be interpretable. The site may have low potential to address the material culture and chronological questions outlined in the Research Design, but costs for such information could be extremely high, considering the site's low-density deposits. If future information is found that

warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT55

This site (Figure 8-63) was recorded as X41DT41 by SMU in 1970. When originally located, site 41DT55 was plowed and consisted

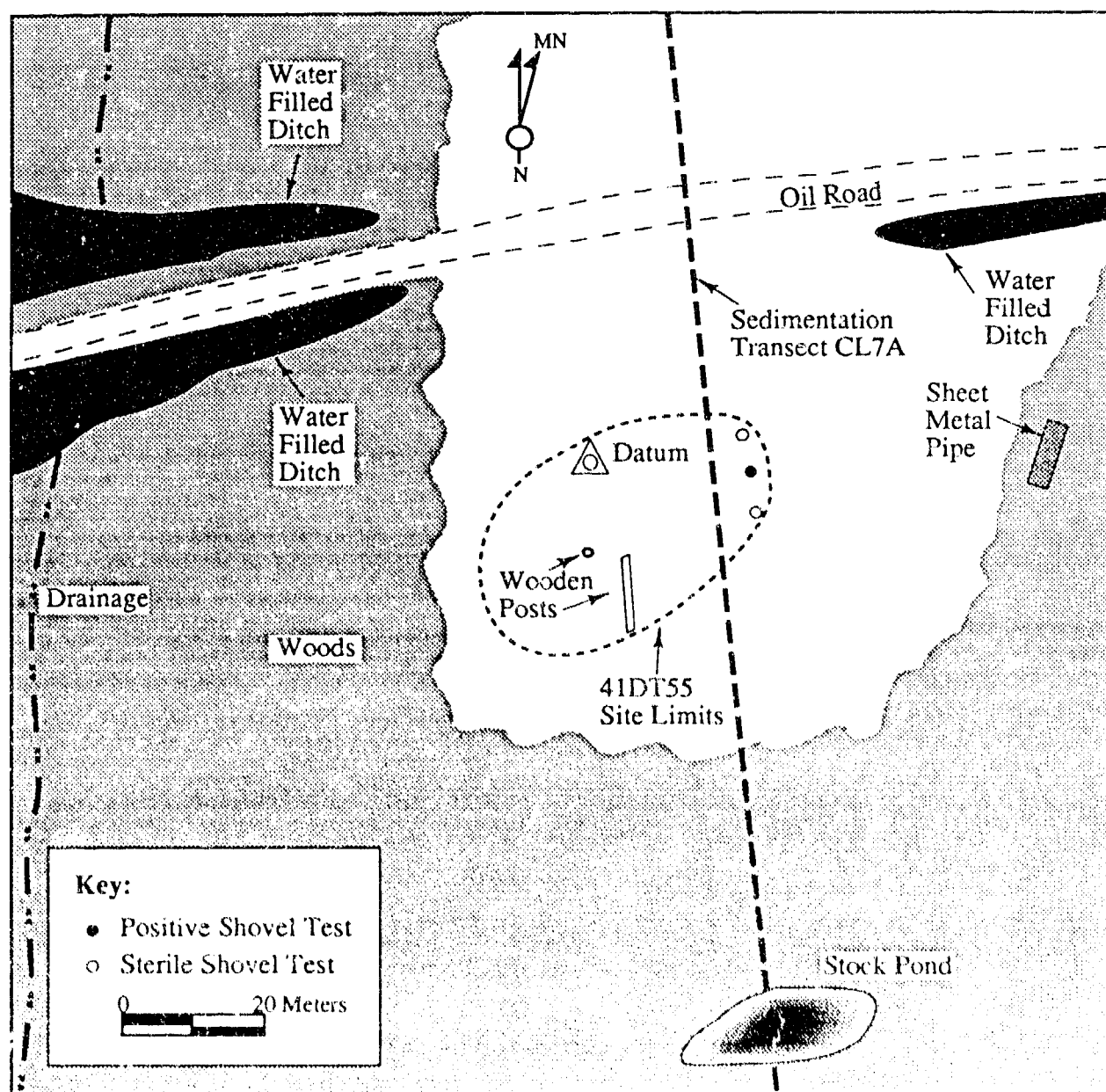


Figure 8-63. Plan of site 41DT55, showing locations of shovel tests, site limits as defined by surface artifacts, and surface features.

of flakes and fire-cracked rock. No materials were collected at that time. It is located in a slope/upland setting on the west end of Lost Ridge, 500 m (1,640 ft) south of the channelized Middle Sulphur River and 1.4 km (0.87 mi) west of the South Sulphur River. Elevation at the site is 136 m (445 ft) above msl, and the mapped soil type is Annona loam. In its native state, this was a floodplain forest consisting of mixed hardwoods.

Stratigraphy

A single soil stratum was identified at site 41DT55. It is a grayish brown (5YR3/2) sandy loam with abundant fallow field roots. This stratum is classified as an Ap-horizon that has been cultivated intensively in the past. It was excavated to 35 cm below ground surface.

Archival Information

A house is shown in the general vicinity of site 41DT55 on the 1914-1915 map of the area. As noted in the discussion for site 41DT7, this house was the only one in the Lost Ridge vicinity in 1914-1915. The WPA files are not available for this tract.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey, mapping, shovel testing, and the placement of a permanent datum. Three shovel tests (35 cm x 35 cm x 35 cm) in addition to the site datum excavation were placed on the site. Only one shovel test (see Figure 8-63) yielded historic material (one refined earthenware fragment). The remainder of the historic items (brown [n=1] and clear [n=1] bottle glass fragments, two manganese solarized table glass fragments, one machine-made brick, and one stove part) were collected from the surface. The manganese solarized table glass dates to ca. 1880-1920. The other historic items all date to the twentieth century. Three flakes, one tested cobble, and one fire-cracked rock were recovered from the modern ground surface.

Recommendations

The prehistoric occupation of site 41DT55 is of unknown age and may represent short-term lithic reduction activities. The historic component dates to the early twentieth century. Based on the low-density remains, the mixture of prehistoric and historic occupations, and past erosion and plowing of site 41DT55, it does not appear to contain intact, potentially significant material culture remains. Accordingly, the site is considered to be clearly not eligible (Category III) for nomination to the National Register because it has low potential to address the material, chronological, and settlement patterning research themes for the study area. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended.

Site 41DT56

This prehistoric site (Figure 8-64) was originally recorded by SMU in 1970. It is located on an east-facing slope, 350 m (1,148 ft) southwest of Doctors Creek and 200 m (656 ft) west-northwest of the old Liberty Grove Cemetery. Elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this was a slope forest with a post oak savannah.

Stratigraphy

Five natural soil strata were identified in Backhoe Trench 159, which is located ca. 200 m northwest of site 41DT56. Stratum I is a light gray (10YR7/1) clay with dark grayish brown (10YR4/2) and strong brown (7.5YR5/8) mottles. It has a gradual upper boundary at 120 cm below surface and was excavated to a maximum depth of 160 cm below ground surface. It is culturally sterile.

Stratum II is a dark grayish brown (10YR4/2) clay with yellowish brown (2.5Y6/4), light gray (10YR7/1), and yellowish red (5YR5/8) mottles. It has a gradual upper boundary at 50 cm below surface and is culturally sterile.

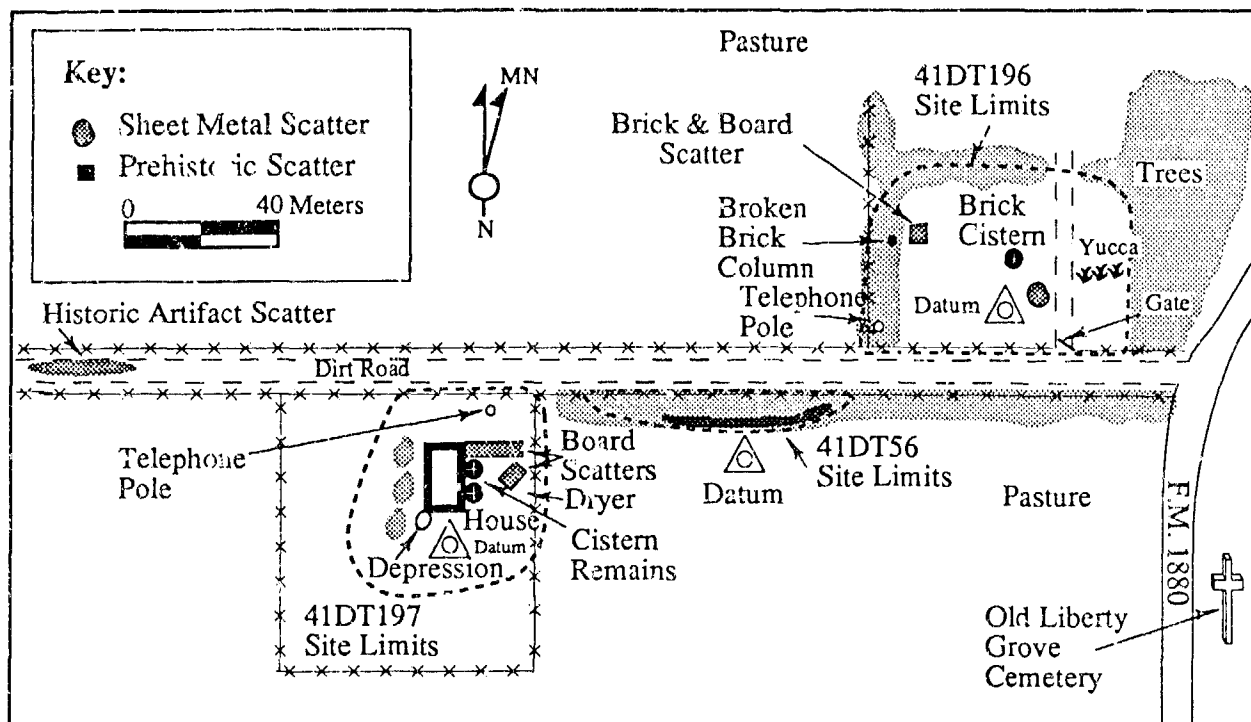


Figure 8-64. Plan of sites 41DT56, 41DT196, and 41DT197, showing locations of site limits, datum excavations, and surface features.

Stratum III is a light gray (10YR7/1) clayey silt loam. It has a gradual upper boundary at 40 cm below ground surface and is culturally sterile.

Stratum IV is a dark grayish brown (10YR4/2) clayey silt loam. It has an abrupt upper boundary at 30 cm below ground surface and is culturally sterile.

Stratum V is a light gray (10YR7/1) clayey silt loam with very dark grayish brown (10YR3/2) mottles. It is classified as an A soil horizon. It is discontinuous across the site, being present in less than 25% of the defined site area. All prehistoric materials from the site have eroded from this stratum.

Archaeological Investigations

In 1970, a surface collection yielded 63 artifacts, primarily including flakes ($n=41$) and chips ($n=21$). Only one retouched piece was recovered. All were Ogallala quartzite. No further work was recommended.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey, mapping, and the

placement of a permanent datum. Nineteen flakes and one core were collected from the road cut, over a 45 m (147.6 ft) long area (see Figure 8-64). A large, eroded semicircular area measuring 12 m x 75 m (39 ft x 246 ft) was inspected for additional artifacts, but none were found.

Recommendations

The site is of unknown prehistoric age, and site function is thought to be related to lithic reduction. No culturally or temporally diagnostic artifacts have ever been collected from the site. This low-density, disturbed site is considered to be clearly not eligible (Category III) for nomination to the National Register. Due to the small assemblage, the absence of cultural or temporal diagnostics, and a lack of intact deposits, it has low potential to address the material culture and chronological questions in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT59

This prehistoric site (Figure 8-65) was recorded as X41DT45 by SMU in 1970. It is located on the modern floodplain of the channelized South Sulphur River, 900 m (2,952 ft) northwest of that river and 730 m (2,394.4 ft) north of FM 71. Elevation at the site is 136.5 m (448 ft) above msl, and the mapped soil type is Kaufman clay. In its native state, this was a floodplain forest. It has been cleared, intensively cultivated, and is in pasture today.

Stratigraphy

Two natural soil strata were identified at site 41DT59. These strata are discussed in order

from older (lower) to younger (upper). Stratum I, the basal clay, is assumed to be continuous across the site locus. Its upper boundary occurs at a depth of 24 cm (9.44 in) below ground surface and extends to a maximum excavated depth of 30 cm (11.81 in) below ground surface. It is a very compact clay and is devoid of gravel or stone. The dominant color is dark yellowish brown (10YR4/5).

Stratum II was encountered in the site datum excavation and in the two shovel probes. It is assumed to be continuous across the site except in the vicinity of the old field road that crosses the site, where it has been eroded. This stratum extends from the ground surface to a maximum excavated depth of 24 cm (9.44 in) below ground surface. It is a very dark grayish brown

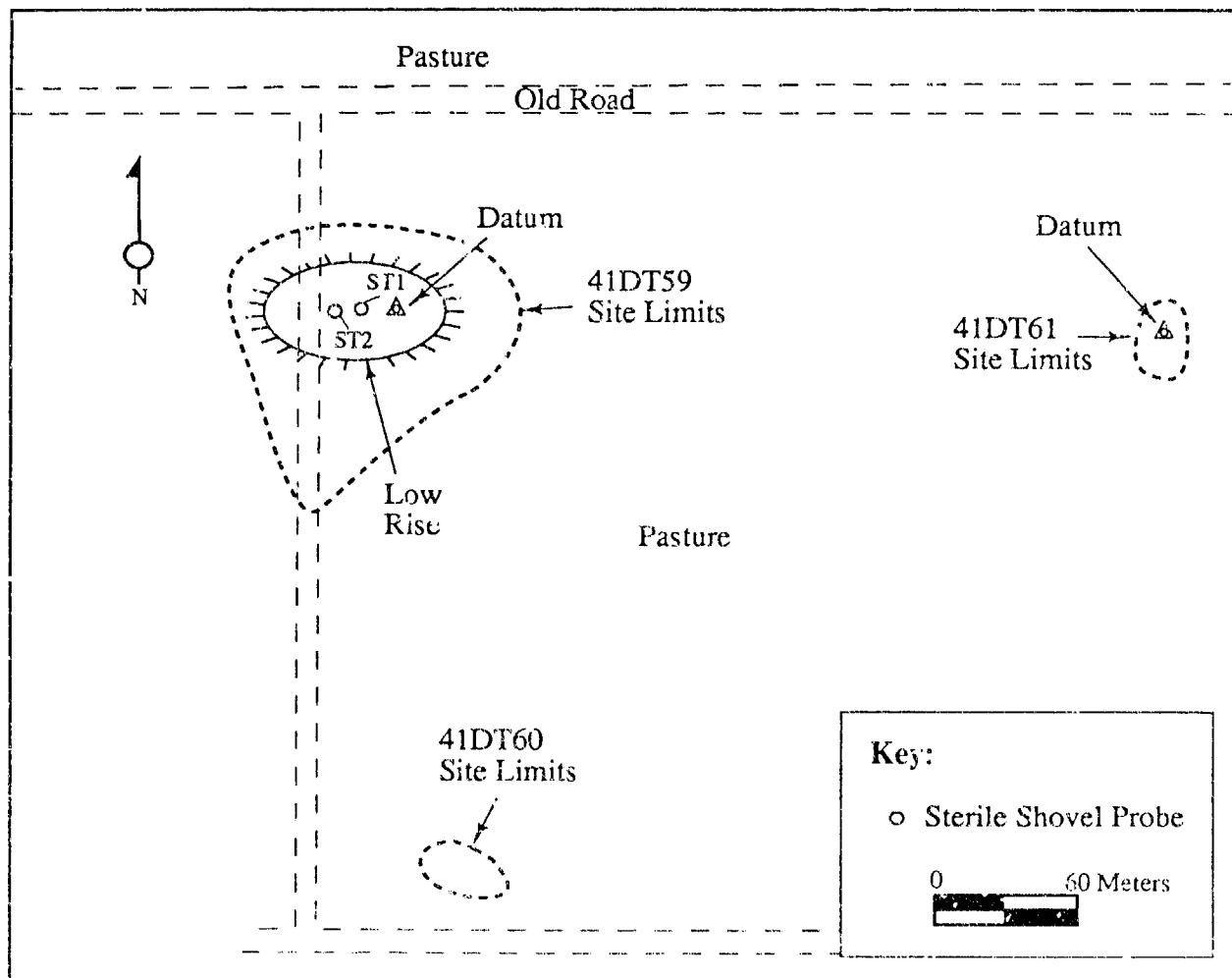


Figure 8-65. Plan of sites 41DT59, 41DT60, and 41DT61, showing locations of datum excavations and site limits as defined by surface artifacts.

(2.5Y3/2) compact silt. Although no cultural materials were noted in the shovel test at this site locus, the surface remains were observed eroding from Stratum II.

Archaeological Investigations

In 1970, flakes, fire-cracked rock, bone, shell, and a ceramic sherd were collected from a 50 m diameter area of the site. In all, 92 artifacts were recovered. These included primarily fire-cracked rock (38%) and flakes (35%). Other items included 10 cores, two bifaces, four retouched pieces, three hammerstones, and six ceramic sherds. The site occupation was determined to be of Late Prehistoric period age, possibly representing an open campsite. No further work was recommended.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey. In all, two person days were expended in attempts to relocate this site. A single shovel test (see Figure 8-65) was excavated for the site datum. This unit (35 cm x 35 cm x 15 cm) was culturally sterile. This site was revisited in June 1990, and an additional two shovel probes were excavated. Both probes were sterile.

Both historic and prehistoric materials were noted on the ground surface of the site. Whiteware ceramics, stoneware, continuous-thread fruit jars, machine-made brick, bottle glass (clear, light green, and manganese), and large concrete fragments were present.

Prehistoric materials consisted of fire-cracked rock, flakes, and mussel shell fragments. No pottery or diagnostic lithic materials were noted. Although not mentioned in 1970, two barns are shown at the site locus on the 1964 USGS map. The historic materials date from the turn of the century to the present.

Recommendations

The intensive surface collections in 1970, and the present investigations did not yield a large artifact assemblage. The work conducted in the 1970s indicates that the site's prehistoric component, as mentioned above, apparently can be ascribed to the Late Prehistoric period. The Historic period materials indicate that the historic

component dates ca. 1900-1970s. The area has been intensively cultivated in the past, and the preservation of intact deposits is unlikely. However, since subsurface investigations were limited, the site is classified as unknown Category (II) National Register eligibility.

Site 41DT60

This prehistoric site (see Figure 8-65) was recorded as X41DT46 by SMU in 1970. It is located on the floodplain of the South Sulphur River 650 m (2,132 ft) west of that river and 660 m (2,164.8 ft) north of FM 71. In its native state, this was a floodplain forest consisting of mixed hardwoods.

Stratigraphy

The floodplain of this area of the South Sulphur River is uniformly level. The only topographic rise near site 41DT60 is site 41DT59. A single stratum is assumed to be uniformly continuous across the floodplain. This is the basal stratum at site 41DT247, 41DT59, and 41DT61. It is a yellowish brown (10YR4/5) to very dark grayish brown (2.5Y3/2) clay.

Archaeological Investigations

When recorded in 1970, 14 flakes, five cores, one hammerstone, one pitted stone, and 37 fire-cracked rocks were collected from the site within a 20 m diameter area. No temporally diagnostic artifacts were recovered. No further work was recommended.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey. No visible remains were noted during the current survey, and the site could not be relocated. In all, three person days were expended in attempts in 1989 and 1990 to relocate this site.

Recommendations

Site 41DT60 is a low-density site with no temporally diagnostic artifacts noted from surface collections in 1970. Due to the lack of a sufficiently interpretable assemblage, the site is

deemed not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT61

This prehistoric site (see Figure 8-65) was recorded by SMU in 1970. It is located on the modern floodplain of the South Sulphur River, 725 m (2,378 ft) west of that river and 900 m (897 ft) north-northeast of FM 71. Elevation at the site is 136 m (446 ft) above msl, and the mapped soil type is Kaufman clay. In its native state, this was a floodplain forest consisting of mixed hardwoods.

Stratigraphy

The floodplain of this area of the South Sulphur River is uniformly level. The only topographic rise near site 41DT61 is site 41DT59. A single stratum is assumed to be uniformly continuous across the floodplain. This is the basal stratum at sites 41DT247, 41DT59, and 41DT60. It is a yellowish brown (10YR4/5) to a very dark grayish brown (2.5Y3/2) clay.

Archaeological Investigations

In 1970, a surface collection of three flakes, one core, one arrow point and 12 fire-cracked rocks was made from the site. Site size was described as being less than 400 m².

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval (5 m) pedestrian survey. No visible remains were noted during the current survey, and the site could not be relocated. In all, three person days were expended in attempts to relocate this site in 1989 and 1990.

Recommendations

Due to intensive cultivation in the past and the lack of visible remains, the site is deemed not eligible (Category III) for the National Register. Although temporal diagnostics, such as the

arrow point, indicate a Late Prehistoric period association, the recovered artifact assemblage is meager. The site appears to have a low potential to address the material culture and settlement questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT141

This prehistoric site (Figure 8-66) was recorded in 1987 (Bousman, Collins, and Pertulla 1988). It is situated in a floodplain setting on the north side of the channelized Middle Sulphur River, 130 m (426.4 ft) east of the FM 1531 bridge crossing. In its native state, this area was a floodplain forest consisting of mixed hardwoods.

Stratigraphy

Six natural strata were identified at site 41DT141 during geomorphological investigations in 1986 (Bousman, Collins, and Pertulla 1988:120), and five natural strata were identified in the present investigations (Figure 8-67). These strata are discussed in order from oldest (lowest) to youngest (uppermost).

Five natural strata were identified at the site within BHT 91, which connected with BHTs 87 and 90. (see Figure 8-66). Stratum I is a dark gray (10YR4/1) silty loam. It has a diffuse upper boundary at 1.3 m below ground surface and a maximum excavated depth of 2.05 m below surface. It is culturally sterile in BHT 91. A humate date (Bousman, Collins, and Pertulla 1988:120) derived ca. 3.3–3.4 m below the surface yielded a date of 3150 ± 90 B.C. (5100 ± 90 B.P.; Beta 17402).

Stratum II is a light brownish gray (10YR6/2) silty clay loam. It has a diffuse upper boundary at 77 cm below ground surface. No artifacts were uncovered *in situ* in BHT 91, but a large mammal bone was recovered from Stratum II in BHT 87.

Stratum III is a grayish brown (10YR4/2) silty clay. It has a diffuse upper boundary at 56 cm below the ground surface. It was culturally sterile in BHT 91.

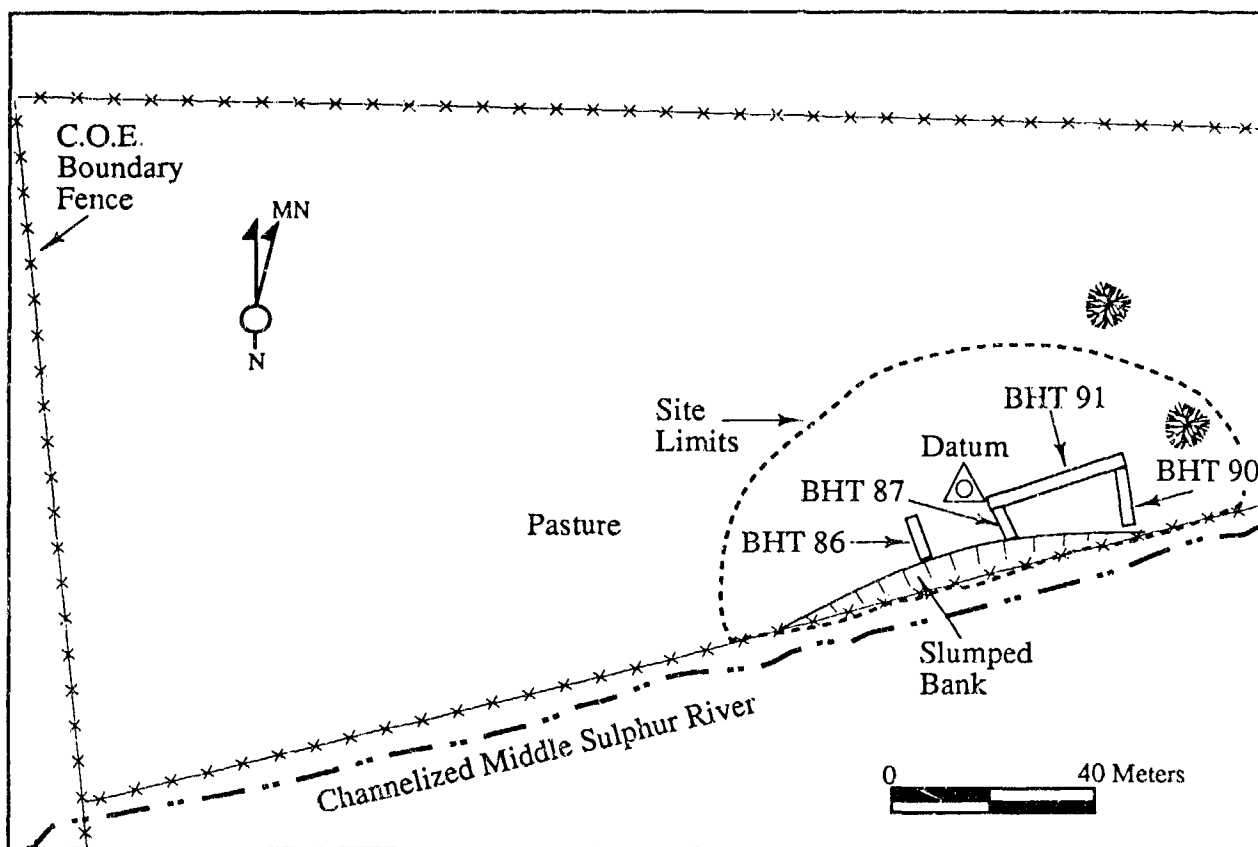


Figure 8-66. Plan of site 41DT141, showing locations of site limits (as defined by surface artifacts) and BHTs 86, 87, 90, and 91.

Stratum IV is a dark gray (10YR4/1) silty clay loam. It has an abrupt upper boundary at 32 cm below ground surface and is also culturally sterile.

Stratum V is the surface soil horizon. It is a very dark gray (7.5YR3/0) clay and is culturally sterile.

Archaeological Investigations

Site 41DT141 was reported as geomorphological Locality 1 by Bousman, Collins, and Perttula (1988:50-51). Prehistoric cultural materials were observed in Profile 20 and Backhoe Trenches 15 and 21. The exposed sediments were all alluvial deposits. The deposits in this area were interpreted as a natural levee, which was present prehistorically (Bousman, Collins, and Perttula 1988:51).

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval

pedestrian reconnaissance, backhoe excavations, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit.

During 1989, site testing was accomplished by excavating four backhoe trenches (see Figure 8-66). Backhoe trenches encompassing a combined lineal extent of 56 m (184 ft) were excavated at the site. From BHT 87, excavated northward from the river bank, five fire-cracked rocks and poorly preserved, unidentifiable bone fragments were recovered from the trench fill. The bone fragments were present in the trench wall at a depth of 95 cm. BHT 91, excavated parallel to the river, contained one small, unidentifiable bone fragment which was recovered from backdirt. All trenches were excavated to depths of 2.2-3 m and were examined by Dr. S. Christopher Caran, consulting geomorphologist. The field designations of the backhoe testing crew were checked and

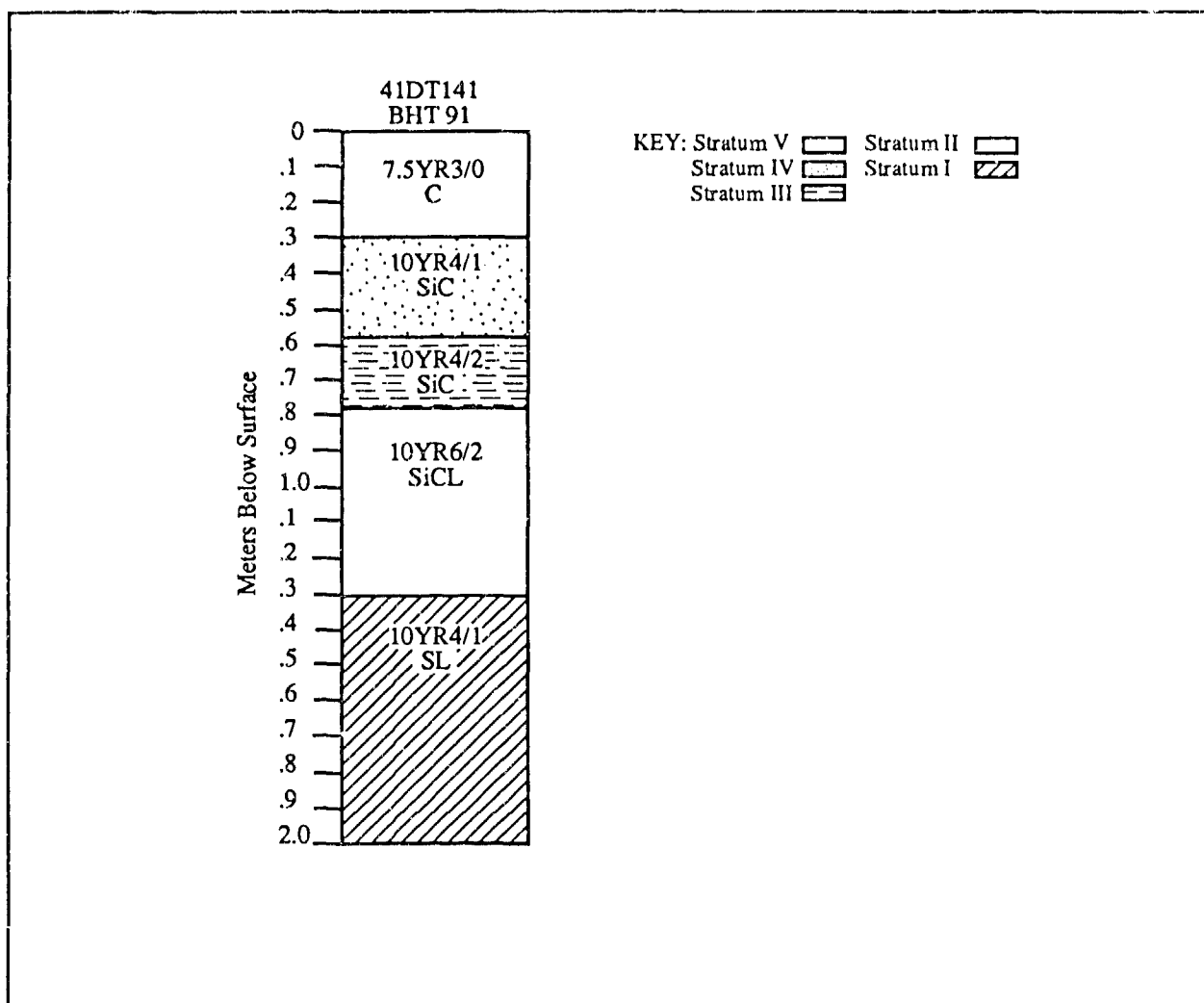


Figure 8-67. Stratigraphic profile of BHT 91 at 41DT141.

correlated to standard nomenclature. Extensive backhoe trenching at the site determined that only low-density cultural materials are present at the site and are buried under approximately 1 m of alluvium.

Recommendations

The portion of the site adjacent to the river has been eroded and is currently slumping into the river. The site is considered to be of unknown prehistoric age and of unknown function. The humate dates from this site suggest that buried soils and potentially stratified deposits are present. Additional investigations conducted by Prewitt and Associates in 1991 indicated that the cultural

deposits are more recent than originally supposed. Based on the low-density and late date of its remains, the site is clearly not eligible for nomination to the National Register (Category III), and no further work is recommended.

Site 41DT143

This prehistoric site (Figure 8-68) was recorded during geomorphological investigations in 1987 (Bousman, Collins, and Perttula 1988). It is located in a floodplain setting, 200 m (196.7 ft) south of the channelized Middle Sulphur River, 2.82 km (1.75 mi) downriver from the FM 1531 bridge crossing. Elevation at the site varies between 135 m (442 ft) and 140 m (460 ft)

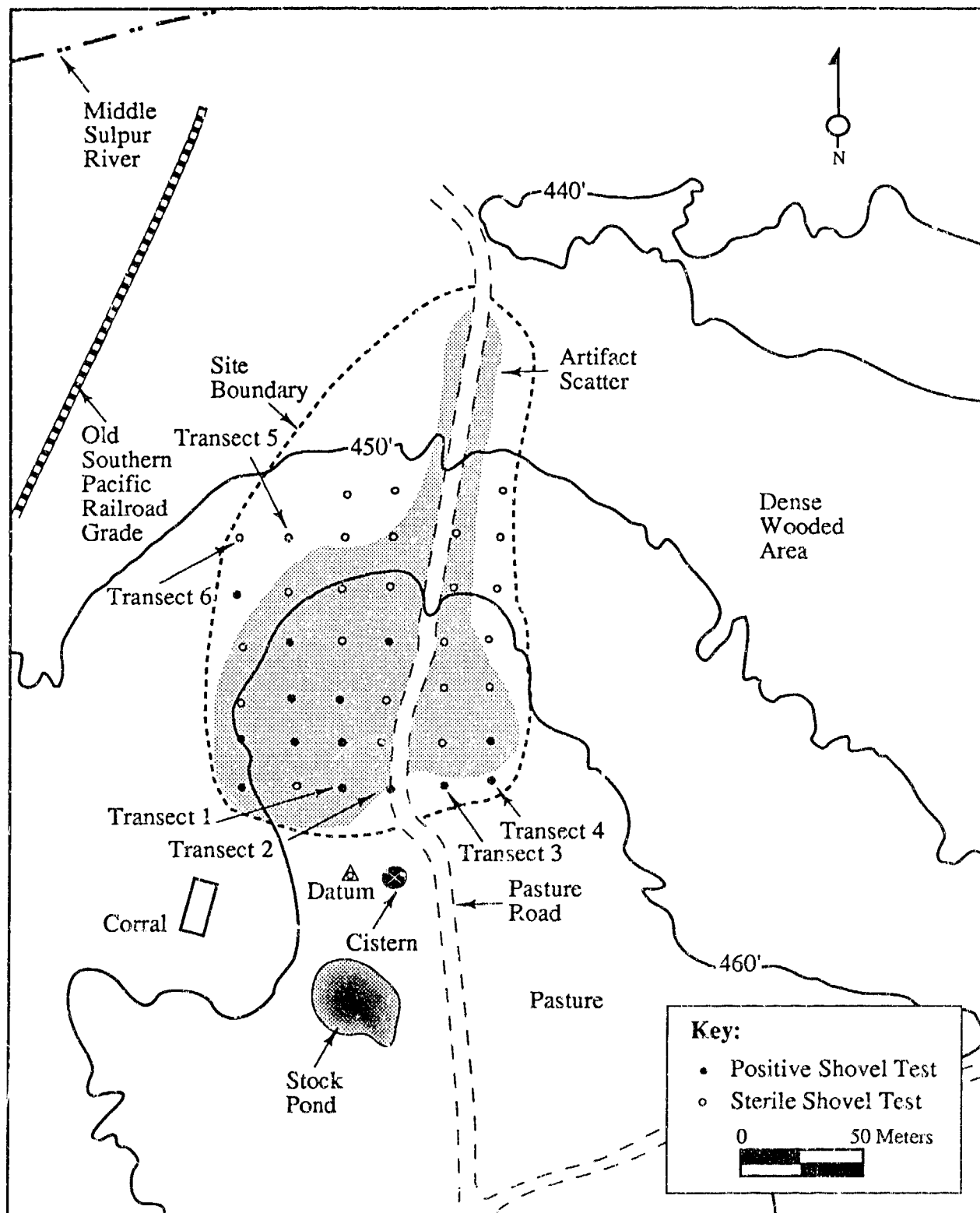


Figure 8-68. Plan of site 41DT143, showing locations of shovel tests, surface artifacts, site boundary (as defined by surface artifacts), and surface features.

above msl, and the mapped soil type is Kaufman clay. In its native state, this area was a floodplain consisting of mixed hardwoods.

Stratigraphy

Five natural strata were identified in Shovel Test 3 by Bousman, Collins, and Perttula (1988: 115). These strata are described from oldest (lowest) to youngest (uppermost). Stratum I is a light olive gray (5Y6/2) clay with dark gray (2.5Y4/0) mottles. It has a distinct upper boundary at 85 cm below ground surface. It is culturally sterile.

Stratum II is a gray (10YR5/1) clay with calcium carbonate and manganese concretions. There are few roots present. It has a gradual upper boundary at 80 cm below ground surface.

Stratum III is a dark gray (10YR4/1) clay with roots and root casts present. It has a gradual upper boundary at 30 cm below ground surface. It is culturally sterile.

Stratum IV is a very dark gray (10YR3/1) clay with grayish brown (10YR5/2) mottles that contain sand. Some roots and root casts are present. It has a gradual upper boundary at 15 cm below ground surface. It is culturally sterile and is classified as a B soil horizon.

Stratum V is a dark gray (10YR4/1) clay loam. It is classified as an A-horizon containing an anthropogenically enriched soil or midden. Cultural materials include flakes and fire-cracked rock.

Archaeological Investigations

Site 41DT143 was originally reported as geomorphological Locality 2 on Lost Ridge, where that ridge extends into the floodplain. One shovel test and five backhoe trenches were excavated in 1987 (Bousman, Collins, and Perttula 1988:47-48). The prehistoric artifacts noted at the site were in a thin surface deposit in Backhoe Trench 6, Shovel Test 3, and eroded exposures. Although the artifacts were not described, they were attributed to the Archaic period. Since the thin cultural lens lay on a residual clay, Bousman, Collins, and Perttula (1988:48) stated that there was little chance for stratification.

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The shovel test (25 cm x 25 cm x 30 cm) excavated for the permanent datum was sterile. A corral area and a cistern for watering livestock are present, adjacent to a heavily traveled field road.

Flakes and fire-cracked rock are exposed in the dirt road that crosses the site. Systematic shovel testing on both sides of the road was accomplished by excavating 39 shovel tests at 20 m intervals (see Figure 8-68). Artifacts were recovered from only 13 test units (Table 8-11). Site area is 8,000 m². Cultural materials were recovered from the top 15 cm of silty clay. Surface collections and shovel tests yielded a total of 36 flakes, four utilized (edge-modified) flakes, one early aborted biface, one biface fragment, one core, ten pieces of fire-cracked rock, and two unmodified cobbles.

Recommendations

Erosion at the site has been severe, and the site deposits appear to be extremely disturbed. No temporally diagnostic artifacts were identified during testing. Both the 1986 and 1989 investigations failed to yield intact deposits. The site is considered to be clearly not eligible (Category III) for nomination to the National Register, and no further work is recommended.

Site 41DT144

This prehistoric site was recorded during geomorphological investigations in 1987 (Bousman, Collins, and Perttula 1988). It is located in the Middle Sulphur River floodplain, ca. 2 km (1.2 mi) east of FM 1531 and 300 m (984 ft) northwest of the Southern Pacific Railroad crossing. In its native state, this area was a floodplain consisting of mixed hardwoods.

Stratigraphy

Five natural strata were identified in Backhoe Trench 1 (Bousman, Collins, and Perttula 1988: 113-114; see Figure 6-9, this report), which

TABLE 8-11

Distribution of Prehistoric Artifacts at Site 41DT143,
Delivery Order Number 7 Study Area

Transect Unit	Depth (cm)	Bifaces	Util. Flakes	Cores	Flakes	FCR	Cobbles	Total
Transect 1								
ST 1	0-15	—	—	—	—	—	2	2
ST 2	0-15	1	—	—	1	—	—	2
Transect 2								
ST 1	0-15	—	—	—	4	3	—	7
ST 4	0-15	—	1	—	—	—	—	1
Transect 3								
ST 1	0-5	—	—	—	1	—	—	1
Transect 4								
ST 1	0-5	—	—	—	—	1	—	1
ST 2	0-10	—	—	—	—	1	—	1
Transect 5								
ST 2	0-15	—	—	—	3	—	—	3
ST 3	0-15	—	—	—	1	—	—	1
ST 4	0-15	—	—	—	—	3	—	3
Transect 6								
ST 1	0-10	1	—	—	—	—	—	1
ST 2	0-10	—	—	—	1	—	—	1
ST 5	0-10	—	—	—	—	1	—	1
Surface	0	—	3	1	25	1	—	30
Total		2	4	1	36	10	2	55

revealed the only cultural materials at the locus defined as site 41DT144. These strata are described in order from oldest (lowest) to youngest (uppermost).

Stratum I is a light yellowish brown (2.5Y6/4) to a grayish brown (2.5Y5/2) clay with light olive gray (5Y6/2) mottles. Calcium carbonate and manganese concretions are common. It has a gradual upper boundary at 135 cm below surface and was excavated to a depth of 190 cm below surface. It is culturally sterile.

Stratum II is a light yellowish brown (2.5Y6/4) to a grayish brown (2.5Y5/2) clay with light olive gray (5Y6/2) mottles. No concretions are present. It has a gradual upper boundary at 85 cm below ground surface, and is culturally sterile.

Stratum III is a light yellowish brown (2.5Y6/4) to a grayish brown (2.5Y5/2) clay with light olive gray (5Y6/2) mottles. Calcium carbonate concretions are present. There is a gradual upper boundary at 50 cm below ground surface. Stratum III is culturally sterile.

Stratum IV is a light yellowish brown (2.5Y6/4) to a grayish brown (2.5Y5/2) clay with light olive gray (5Y6/2) mottles. This stratum is classified as a B-horizon. It has a gradual upper boundary at 20 cm below ground surface, and the stratum is culturally sterile.

Stratum V is a very dark gray (N3/0) clayey loam with layers of very dark gray (10YR3/1) clay ca. 1 cm thick. These may represent recent flooding episodes. It is classified as an A-horizon. It is assumed that the cultural materials found in the backdirt were derived from this soil horizon.

Archaeological Investigations

In 1986, site 41DT144 was identified as the Ragland South Locality 16. Five backhoe trenches were excavated in the floodplain and the northern slope apron of Lost Ridge. No radiocarbon determinations were made (Bousman, Collins, and Pertulla 1988:4347). A relatively small number of flakes were noted in backdirt of Backhoe Trench 1; all other excavations were sterile (Bousman, Collins, and Pertulla 1988:43).

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. The single shovel test (25 cm x 25 cm x 30 cm) excavated at the site was sterile. A permanent datum was placed in this unit. In all, two person days were expended in attempts to locate cultural materials in the area 41DT144.

The only cultural materials noted at site 41DT144 were from the backdirt of geomorphological excavations performed in 1986 (Bousman, Collins and Pertulla 1988:43). The site deposits were thought to be of late Holocene age and had been plowed.

Recommendations

Site 41DT144 is apparently a low-density site, if any *in situ* deposits are present at all. The site appears to have little potential to address the questions outlined in the Research Design without a great expenditure of funds. The site is deemed clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register

eligibility. No further work is recommended at this time.

Site 41DT161

This newly recorded prehistoric site (Figure 8-69) is located immediately south of the old Middle Sulphur River channel, and lies on the river floodplain in a pasture. It is 275 m (902 ft) east of F.M. 1531. The elevation of the site is 137 m (450 ft) above msl, and the mapped soil type is Kaufman clay. In its native state, this area was a floodplain forest consisting of mixed hardwoods. It has been cleared and intensively cultivated during the Historic period.

Stratigraphy

The stratigraphic sequence is quite variable from locus to locus in this portion of the Middle Sulphur River drainage, possibly due to shifts in the river channel or land clearing. Backhoe Trench 98 (Figure 8-70) revealed a profile typical of the Kaufman clay. It consists of a single stratum which is a black (10YR2/1) clay. This stratum contained a fire-cracked rock lens with a diffuse band of charcoal flecks, 5.5 cm below ground surface. Stratum I was excavated to a maximum depth of 85 cm.

Backhoe Trench 105, located outside of, but adjacent to the defined limits of site 41DT161, revealed considerably different strata (see Figure 8-70). This trench contained the remains of a burned tree stump, extending 25-65 cm below ground surface. Three natural soil strata were defined in BHT 105. They are discussed in order from oldest (lowest) to youngest (uppermost).

Stratum I is a dark grayish brown (10YR4/2) sandy clay loam. It has a distinct upper boundary at 55 cm and was excavated to a maximum depth of 120 cm below ground surface. It is culturally sterile.

Stratum II consists of the burned remains of the tree stump, with many charcoal flecks present. It is a black (7.5YR2/0), loosely consolidated clay. The upper boundary is abrupt at 25 cm below ground surface. It is culturally sterile.

Stratum III is the surface soil horizon. It is a black (7.5YR2/0) compact clay and is culturally sterile.

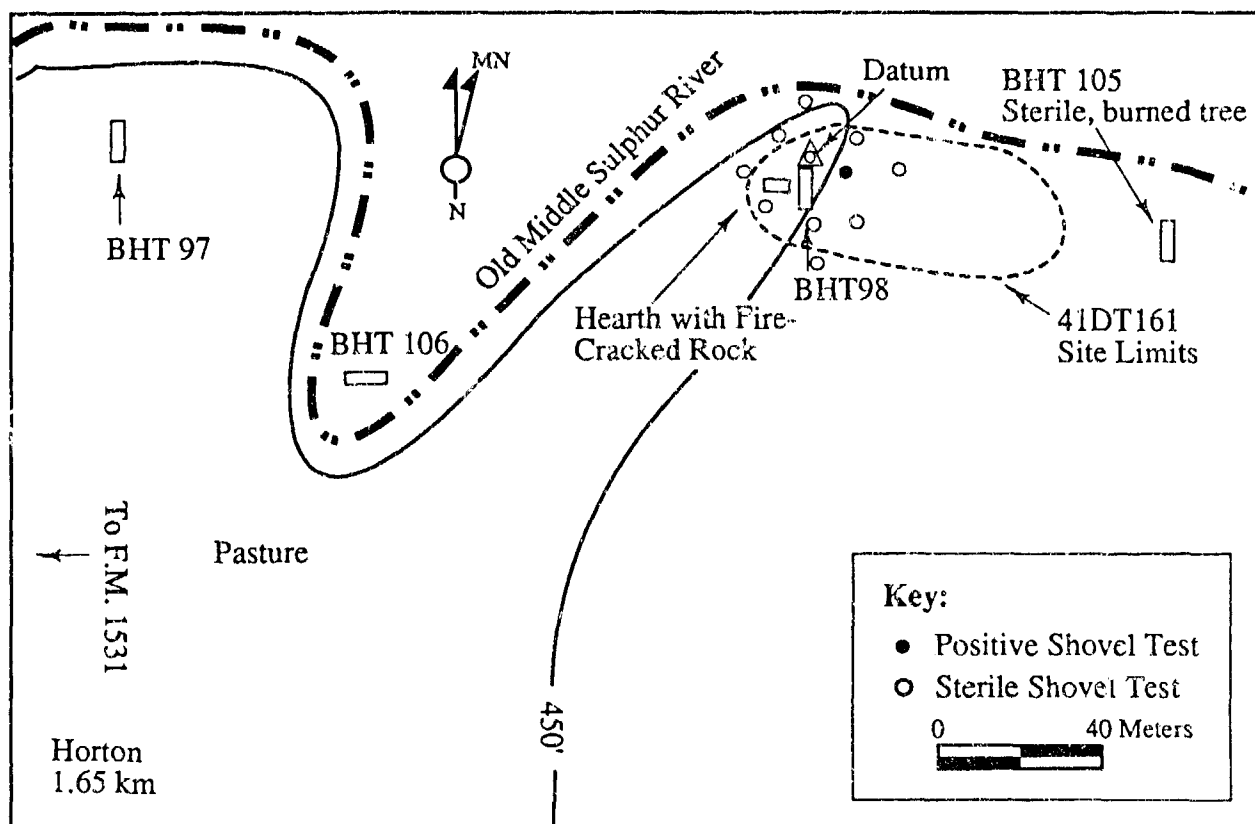


Figure 8-69. Plan of site 41DT161, showing locations of shovel tests, site limits (as defined by surface artifacts), and BHTs 97, 98, 105, and 106.

Archaeological Investigations

The site was discovered during backhoe trenching when a single piece of fire-cracked rock was found at a depth of 50 cm below the surface in BHT 98. This was first thought to be a possible hearth and was designated Feature 1 (see below). Excavation continued to a depth of 85 cm. No other artifacts were observed in the trench profile. From the trench backdirt, one whole flake, one broken flake, two fire-cracked rocks, and one fragment of bone were recovered.

A second backhoe trench, BHT 105, was excavated ca. 90 m (295.2 ft) east of BHT 98. BHT 105 contained an area of charcoal-flecked, burned soil ranging from 25 cm to 75 cm below ground surface. No artifacts were recovered from this trench.

Testing was accomplished by excavating eleven 50 cm x 50 cm shovel tests to a depth of 60 cm below surface. The testing interval was

10 m. Artifacts were recovered from only one test unit (see Figure 8-69), and included two flakes and one calcined bone fragment from 47-48 cm below surface.

Feature 1

To sample Feature 1, a 100 cm x 50 cm unit was placed along the west trench wall of BHT 98. The sterile 45 cm thick overburden was not screened. Feature 1 was carefully exposed, with plan views drawn for each level. All fill was saved for flotation processing. A concentration or lens of fire-cracked rock was encountered 45-55 cm below surface (Figure 8-71). No discernible pit or difference in sediment compaction was observed. Maximum dimensions of the scatter of fire-cracked rock were 80 cm x 40 cm, with the primary concentration contained within a 30 cm x 20 cm area. Only one piece of fire-cracked rock was recovered 55-66 cm below ground surface.

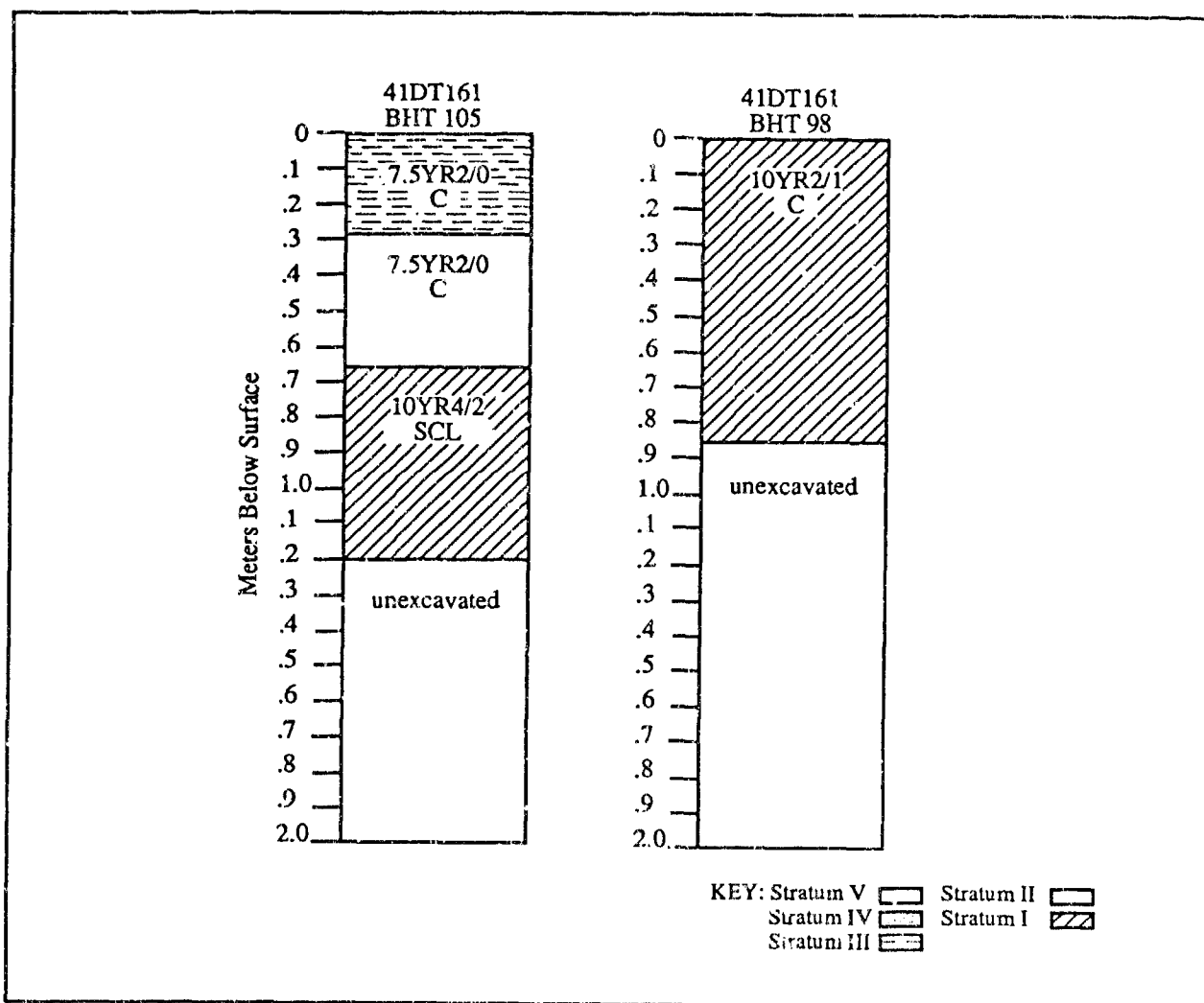


Figure 8-70. Stratigraphic profiles of BHTs 98 and 105 at 41DT161.

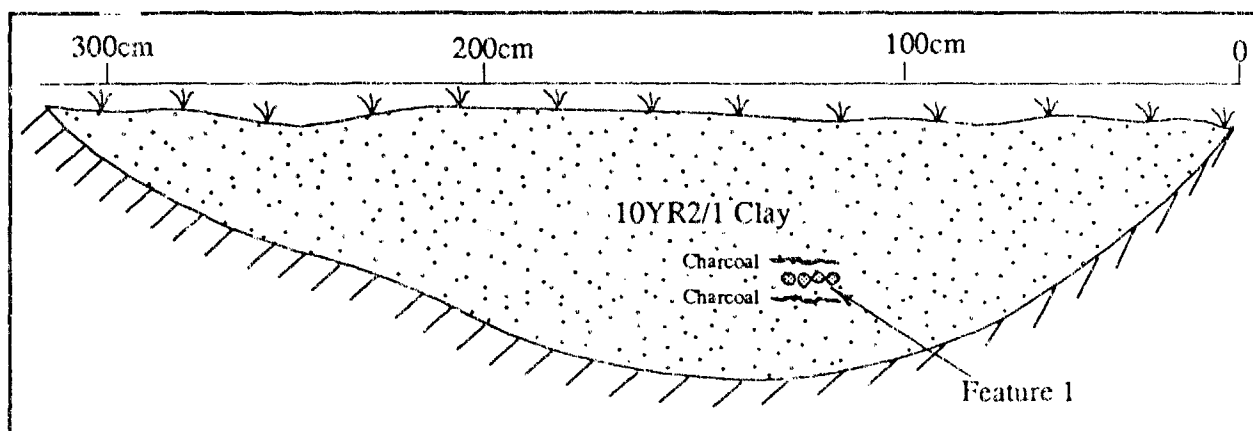


Figure 8-71. Stratigraphic profile of BHT 98 at 41DT161 (facing west), showing fire-cracked rock lens.

Recommendations

No temporal diagnostics were recovered from the site during testing. The site is of unknown prehistoric age, and is interpreted as a limited activity camp. Although it is presumed that the site has only low-density artifacts, the potential exists to recover evidence of short-term activities carried out at the site in prehistory. The site has as yet undetermined potential to address the chronological, subsistence, and material cultural questions outlined in the Research Design, and is therefore classified as a Category II locality. Further investigation may yield more information.

Site 41DT162

This site (Figure 8-72) is located 1.1 km (0.68 mi) northwest of Free Hope Church. The elevation at the site is 137 m (450 ft) above msl. The mapped soil type is Wilson silt loam and Crockett loam. In its native state, this area was a post oak savannah, with upland prairies adjacent to the west and north.

Stratigraphy

Two natural strata were identified within the confines of the site locus. These are described below from the older (lower) to younger (upper).

Stratum I occurs in all shovel test probes and is assumed to be horizontally continuous across the study area. Vertically, its upper boundary varies from 9 cm (3.54 in) below ground surface to 30 cm (11.81 in) below ground surface. Stratum I is a culturally sterile, very compact, clayey silt with infrequent quartzite fragments and pebbles. Its dominant color is light yellowish brown (2.5Y6/4) with brownish yellow (10YR6/6) mottling.

Stratum II is continuous across the study area. Vertically, it occurs from ground surface to a minimum depth of 9 cm (3.54 in) and extends to a maximum excavated depth of 30 cm (11.81 in) below ground surface. Stratum II is fine compact silt containing many organics and fallow field root systems in its upper limits. It exhibits no internal stratification, and contains very infrequent subrounded quartzite pebbles. The dominant color of the matrix is dark grayish brown (10YR4/2).

It is separated from the underlying Stratum I by a clear smooth interface or boundary. Stratum II is a modern plow zone.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, shovel testing, mapping, and photography. In March 1991, additional testing was conducted at this site via the excavation of 10 shovel test probes (50 cm x 50 cm x 50 cm) spaced at 20 m intervals (see Figure 8-64). At this time, a depression, possibly an old, collapsed well, was noted near the fenceline that bisects the site on a north-south axis.

A surface scatter of lithic artifacts was noted in the 1989 pedestrian survey. The densest cultural remains were recovered on a road which passes through the site (see Figure 8-72). A non-controlled surface collection was conducted and yielded 44 Ogallala flakes, one biface, two cores, one point tip fragment, eight shattered cobble fragments, and one burned shell fragment. One fragment of a hand-made brick was also recovered.

The materials recovered from the March 1991 investigations include four historic and 39 prehistoric artifacts, all recovered from Stratum II. The prehistoric assemblage from this phase of investigation is composed entirely of lithic debitage (Table 8-12), indicating Native American manufacture and/or refurbishing of stone tools at this locality. Historic period artifacts include two ceramic sherds that were handpainted transitional ironstone (Davenport/Springware dating ca. 1840-1850). The pre-1860 ironstone sherds were recovered from units adjacent to the possible well, suggesting that feature may ascribe to the pre-1860 component at the site. It is not known whether the single fragment of hand-made brick recovered during the pedestrian reconnaissance is associated with the possible well.

Recommendations

The archaeological investigations undertaken at site 41DT162 defined two natural strata. Aboriginal cultural resources recovered from the

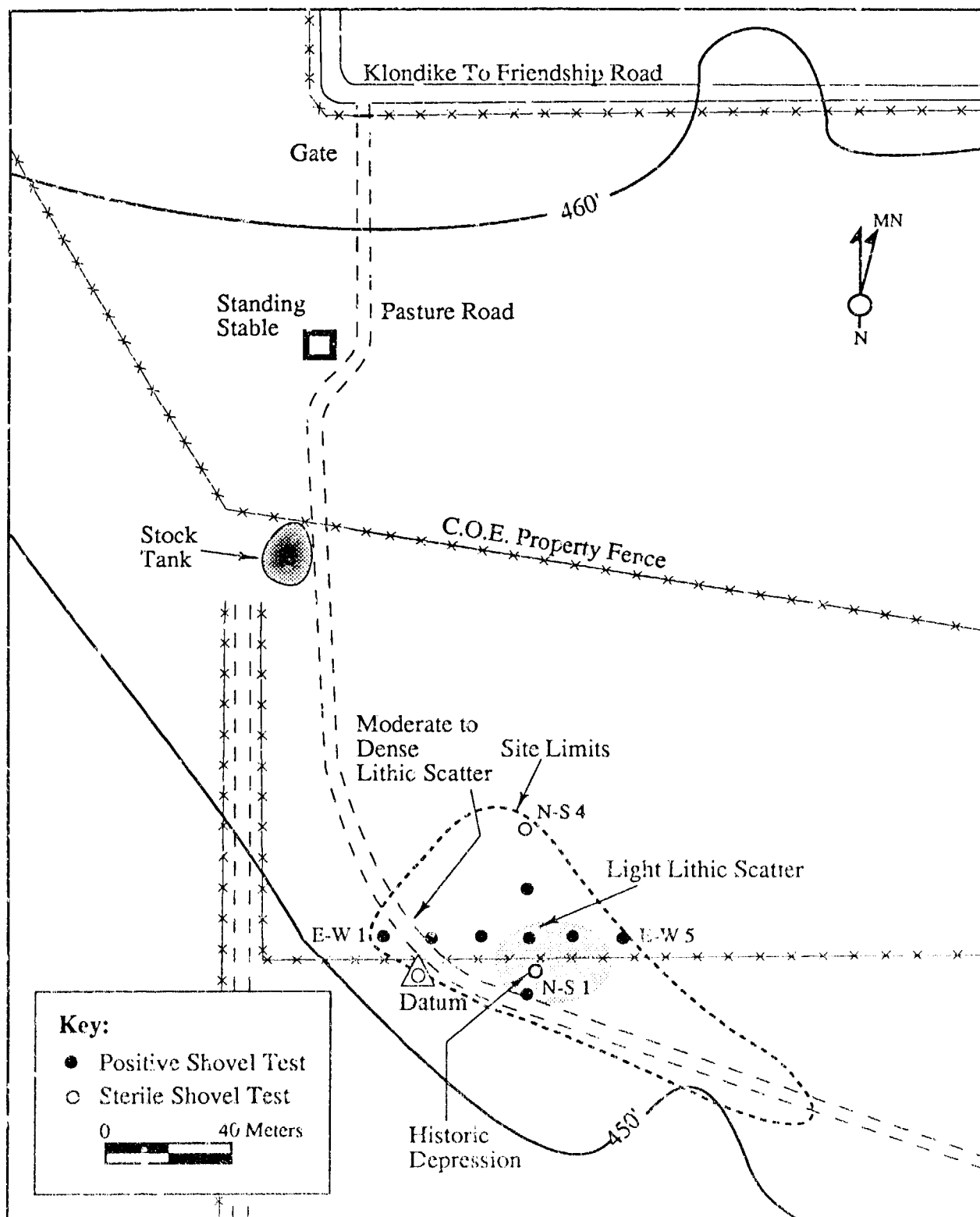


Figure 8-72. Plan of site 41DT162, showing locations of surface artifacts, shovel tests, site limits (as defined by surface artifacts and positive shovel tests), and land modifications.

TABLE 8-12

Distribution of Flaked Stone Artifacts from 41DT162, Delivery Order Number 7 Study Area,
by Excavation Unit, Arbitrary Level, Raw Material Type, and Artifact Technotype

Excavation Unit	Stratum	Level	Cores and Core Fragments	Primary Core Trimming Flakes	Secondary Core Trimming Flakes	Tertiary Core Trimming Flakes	Bifaces and Biface Fragments	Primary Biface Thinning Flakes	Secondary Biface Thinning Flakes	Tertiary Biface Thinning Flakes	Projectile Points/Point Fragments	Specialized Implements	Non-Diagnostic Shatter	Total
N-S LINE														
Probe 1	II	0-10 cm	—	—	—	—	—	—	1	—	—	—	—	1
	II	10-20 cm	—	—	1	—	—	—	1	1	—	—	—	3
Probe 2	II	0-10 cm	—	—	—	—	—	—	1	1	—	—	—	2
	II	10-20 cm	—	1	—	—	—	—	1	—	—	—	—	2
Probe 3	II	0-10 cm	—	—	—	—	—	1	—	1	—	—	—	2
	II	10-20 cm	—	—	—	—	—	—	—	1	—	—	—	1
E-W LINE														
Probe 1	II	0-10 cm	—	1	—	—	—	1	2	—	—	—	—	4
Probe 2	II	0-10 cm	—	—	—	—	—	4	5	2	—	—	1	12
	II	10-20 cm	—	1	1	—	—	2	—	—	—	—	—	4
	II	20-30 cm	—	—	—	—	—	1	2	1	—	—	—	4
Probe 3	II	0-10 cm	—	—	—	—	—	—	1	—	—	—	—	1
Probe 4	II	0-10 cm	—	—	—	—	—	—	—	1	—	—	—	1
Probe 5	II	0-10 cm	—	—	—	—	—	—	—	2	—	—	—	2
SUBTOTAL: RAW MATERIALS														
Fine-grained*		N	—	3	2	—	—	7	11	8	—	—	1	32
Ogallala Quartzite		%	—	9.4	6.2	—	—	21.9	34.1	25.0	—	—	3.1	100.0
Medium-grained*		N	—	—	—	—	—	2	3	2	—	—	—	7
Ogallala Quartzite		%	—	—	—	—	—	28.6	42.7	28.6	—	—	—	100.0
TOTAL			—	3	2	—	—	9	14	10	—	—	1	39
PERCENT OF TOTAL			—	7.7	5.1	—	—	23.1	35.9	25.6	—	—	2.6	100.0

* see discussion of raw material for 41HF159

NOTE: One piece of debitage shows utilization.

site locus most likely represent episodic Native American manufacture and/or refurbishing of stone tools. The cultural attribution and temporal provenance of this component is unknown. The prehistoric landform is only partially preserved, as the southern half of the site locus is heavily eroded. Significant Historic period artifacts and a possible well feature that may represent the remains of a Frontier Wave farmstead (ca. 1850s) may exist within the confines of the site locus. In summary, based upon the results of the pedestrian reconnaissance, subsurface testing, and the presence of significant Historic period cultural features and artifacts, it is our recommendation that the site locus warrants further investigation (Category II) to determine the nature and extent of the historic occupation.

Site 41DT163

This newly recorded prehistoric site (Figure 8-73) lies in pasture at the northern end of a ridge top at the 142 m (466 ft) contour. Site 41DT164 is located on this same ridge. Johns Creek lies 500 m (1,640 ft) to the east. The site is 550 m (1,804 ft) south of FM 1528. The mapped soil type is Annona loam. In its native state, this area was a post oak savannah with adjacent upland prairie.

Stratigraphy

Five natural strata were identified in Backhoe Trenches 195 and 196 at site 41DT163. The five strata observed in this landform correspond to the typical Annona loam profile, which consists of A1- and A2-horizons over well-developed B-horizons (B21 to B25). The stratification of BHT 195 has already been described in the results of the geomorphic investigation of the Johns Creek slope/upland physiographic area (see Chapter 6). The stratification of BHT 196 (Figure 8-74), excavated on the northern periphery of the site, is described below from older (lower) to younger (upper).

Stratum I is a yellowish red (5YR5/8) silt and was excavated to a maximum depth of 75 cm below ground surface and had an upper boundary 17 cm below surface. All cultural items were recovered from this stratum.

Stratum II is a very dark gray (10YR3/1) silt with pale brown (10YR6/3) mottles.

Archaeological Investigations

Fieldwork conducted at this site consisted of pedestrian survey at 20 m intervals. Since this area appeared to be a low-lying knoll, it was interpreted as a landform with a high potential for human occupation. Therefore, backhoe trenches ($n=3$) and hand excavated shovel tests ($n=27$) were dug across this landform, and the soil matrix was screened (see Figure 8-73). These shovel tests were sterile. BHT 196 yielded cultural remains along the northern end of this transect, and cultural materials were exposed on a low knoll 10 m south of Backhoe Trench 195.

This prehistoric site was originally identified in Backhoe Trench 196. Surface remains were noted south of sterile Backhoe Trench 195, and nine additional shovel tests were excavated in this area. The site area is 9,600 m², based on the positive units and Backhoe Trench 196. Artifacts recovered in the backhoe trench consisted of 25 whole flakes, eight broken flakes, two utilized flakes, two cores, one late aborted biface, 13 pieces of shatter, fire-cracked rocks, and one Gary dart point (Figure 8-75). All artifacts were recovered at a depth of 22-41 cm below ground surface in the site area.

Artifacts collected from the ground surface south of BHT 195 and shovel testing include three bifaces, nine whole flakes, three broken flakes, nine utilized flakes, one core, and nine fire-cracked rocks. Table 8-13 lists the artifact distribution in the shovel-tested area. One unit (ST 2) was excavated to 44 cm below surface, with cultural materials recovered to a maximum depth of 41 cm below ground surface.

The 100 artifacts (excluding fire-cracked rock) recovered from the site appear to represent short-term activities with a focus on lithic reduction. The presence of a resharpened Gary dart point indicates a Late Archaic period occupation. The cultural materials at the site indicate that buried deposits may be present, possibly in sealed contexts. Also, this site may represent a single component dating to a poorly understood period at Cooper Lake.

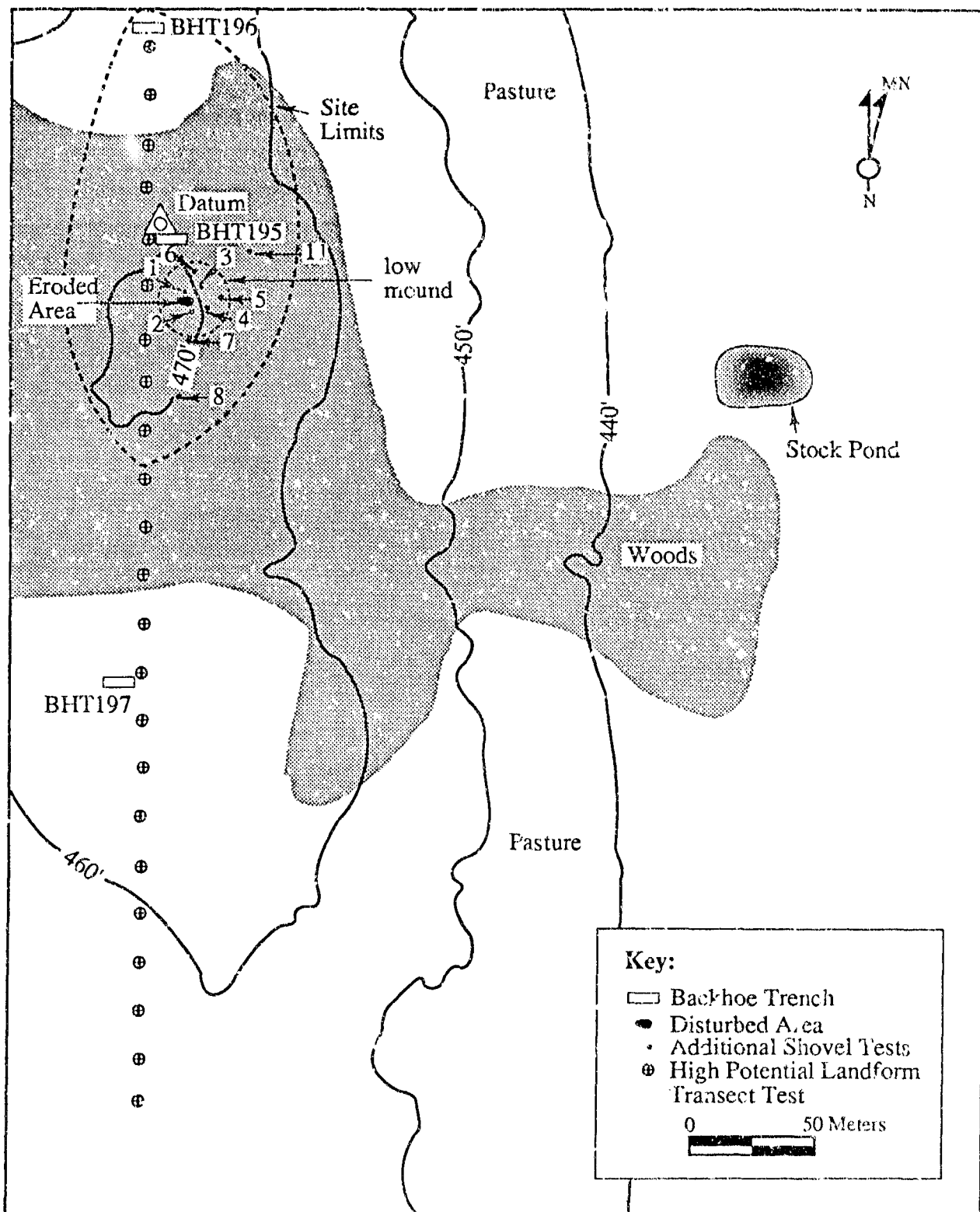


Figure 8-73. Plan of site 41DT163, showing locations of shovel tests; BHTs 195, 196, and 197; site limits (as defined by surface artifacts); and surface features.

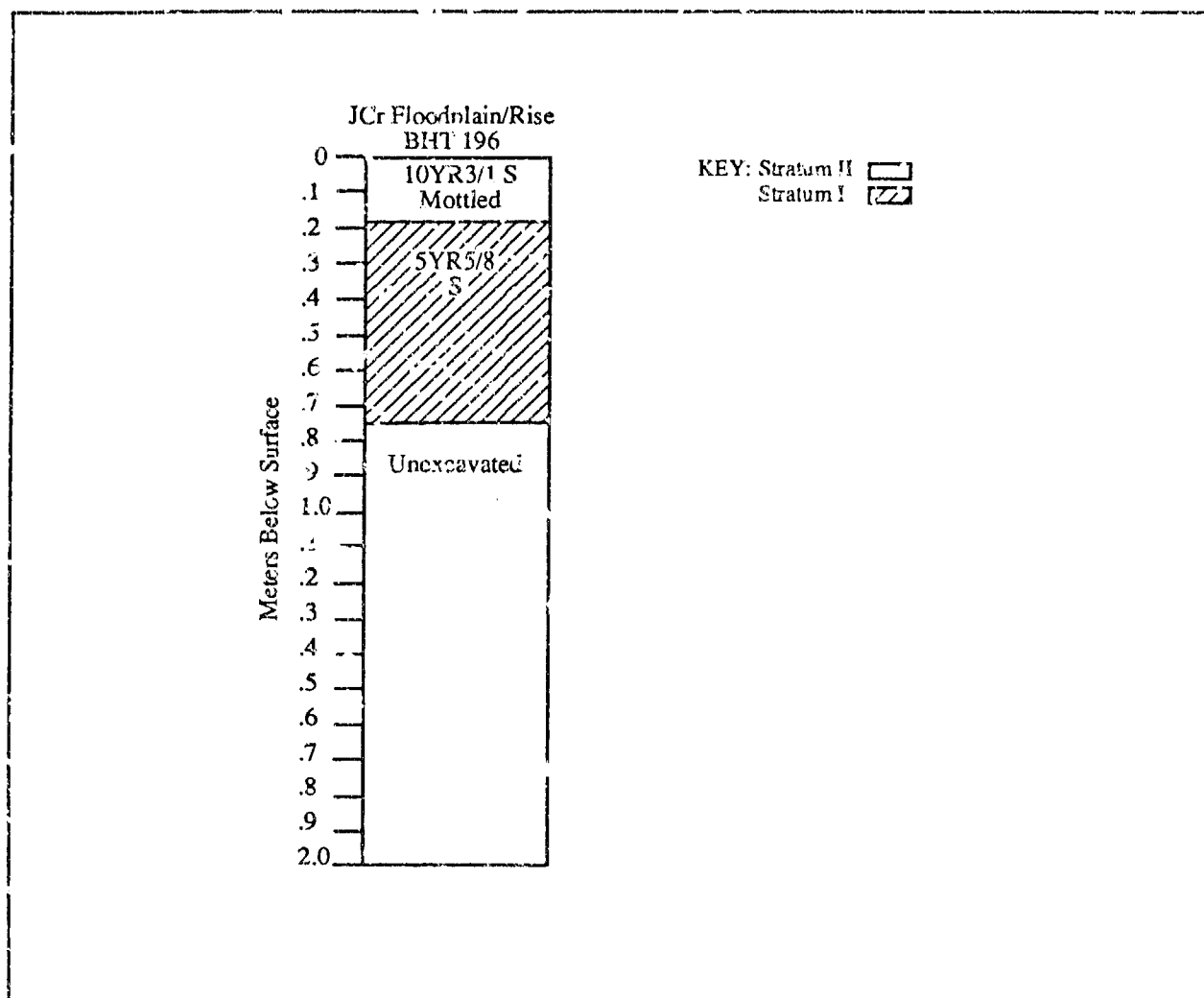


Figure 8-74. Stratigraphic profile of BHT 196, adjacent to site 41DT163.

TABLE 8-13

Distribution of Prehistoric Artifacts at Site 41DT163,
Delivery Order Number 7 Study Area

Unit	Depth (cm)	Dart	Biface	Util. Flake	Core	Flake	FCR	Total
BHT 196	22-41	1	1	2	2	46	2	54
ST 1	0-30	—	—	—	1	—	1	2
ST 2	0-44	—	—	2	—	11	5	18
ST 3	0-30	—	—	1	—	—	—	1
ST 6	0-30	—	—	2	—	—	1	3
ST 8	0-33	—	—	1	—	1	—	2
ST 11	0-30	—	2	2	—	—	1	5
Surface	0	—	3	9	1	12	9	34
Total		1	6	19	4	70	19	119



Figure 8-75. Flaked stone artifacts from site 41DT163, Delivery Order Number 7 study area (left-right): biface fragment (BHT 196, 22-56 cm), Gary dart point (BHT 196, 41 cm), untyped dart point fragment (surface).

Recommendations

The resharpened and broken dart points and bifaces indicate that the artifact assemblage from 41DT163 could yield information on lithic reduction strategies and tool-kit refurbishing during the Late Archaic. It appears to be a single component occupation, or one with spatially separable components. The site is classified as Category II and recommended for further work to determine its National Register eligibility.

Site 41DT164

This newly recorded prehistoric site (Figure 8-76) is located at the south end of a ridge that slopes south towards an unnamed tributary of Johns Creek. The site is 550 m (1,804 ft) west of Johns Creek and 100 m (328 ft) north of the unnamed tributary. Elevation at the site ranges between 136.6 m (448 ft) and 138.3 m (454 ft) above msl, and the mapped soil type is Normangee clay loam. The native vegetation in this area consisted of post oak savannah, fringing a broad upland prairie.

Stratigraphy

Three natural soil strata were identified in BHT 198 at site 41DT164 (Figure 8-77). These strata are described from oldest (lowest) to youngest (uppermost). Stratum I is a dark grayish brown (10YR4/2) clay with light gray (10YR6/4) to red (2.5YR4/8) mottles. It has a gradual upper boundary at 40 cm below surface and was excavated to a maximum depth of 90 cm below ground surface.

Stratum II is a very pale brown (10YR7/3) silty clay. It has a gradual upper boundary at 32 cm below ground surface and is culturally sterile. Stratum II is continuous across the site.

Stratum III is a light yellowish brown (2.5YR6/4) silt loam and forms the surface soil horizon at the site. It is discontinuous across the site as erosion has removed this stratum in 50% of the site area.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included

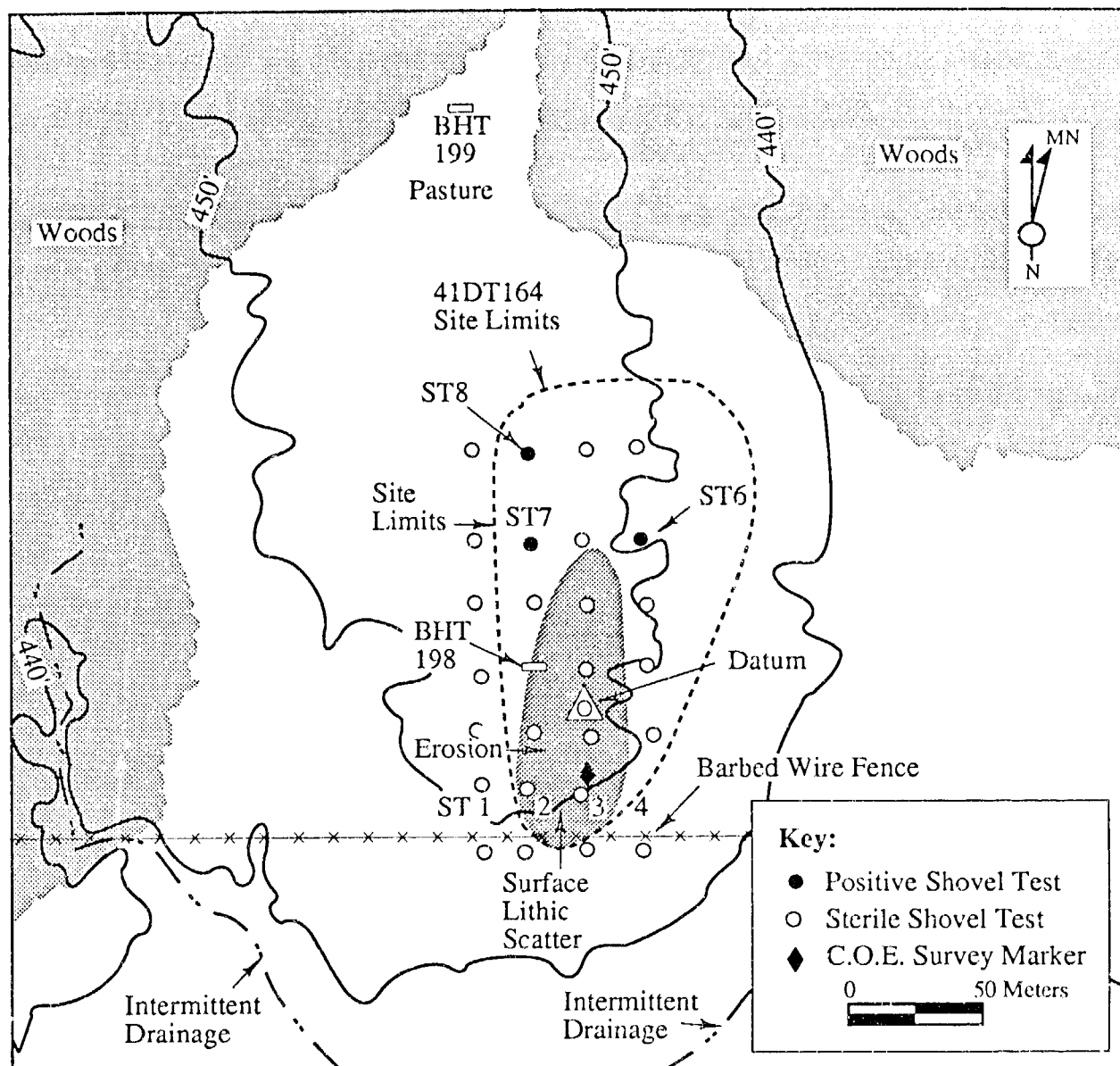


Figure 8-76. Plan of site 41DT164, showing locations of surface artifacts, shovel tests, site limits (as defined by surface artifacts), BHTs 198 and 199, and surface features.

close interval (5 m) pedestrian survey. Artifacts exposed on the surface were collected and the site limits were defined.

Eight shovel tests (35 cm x 35 cm x 40 cm) were excavated, and the soil matrix was screened (0.25 inch mesh). In addition, a 25 cm x 25 cm x 30 cm shovel test was used to place the permanent site datum (see Figure 8-76). Two backhoe trenches were also excavated on this landform to determine whether deeper deposits were present. One of these trenches was emplaced within the

eroded portion of the site, the other was emplaced ca. 100 m (328 ft) north of the site.

Only three of the shovel tests excavated at the site were positive (Table 8-14). Based on the positive shovel tests and surface artifacts, the site covers approximately 5,400 m². The maximum depth of the deposit is 30 cm. In Transect 2, one core and one flake were recovered from Shovel Test 7, 0-15 cm below surface and one fire-cracked rock was recovered in ST 8, 0-10 cm below surface. In Transect 4, two flakes,

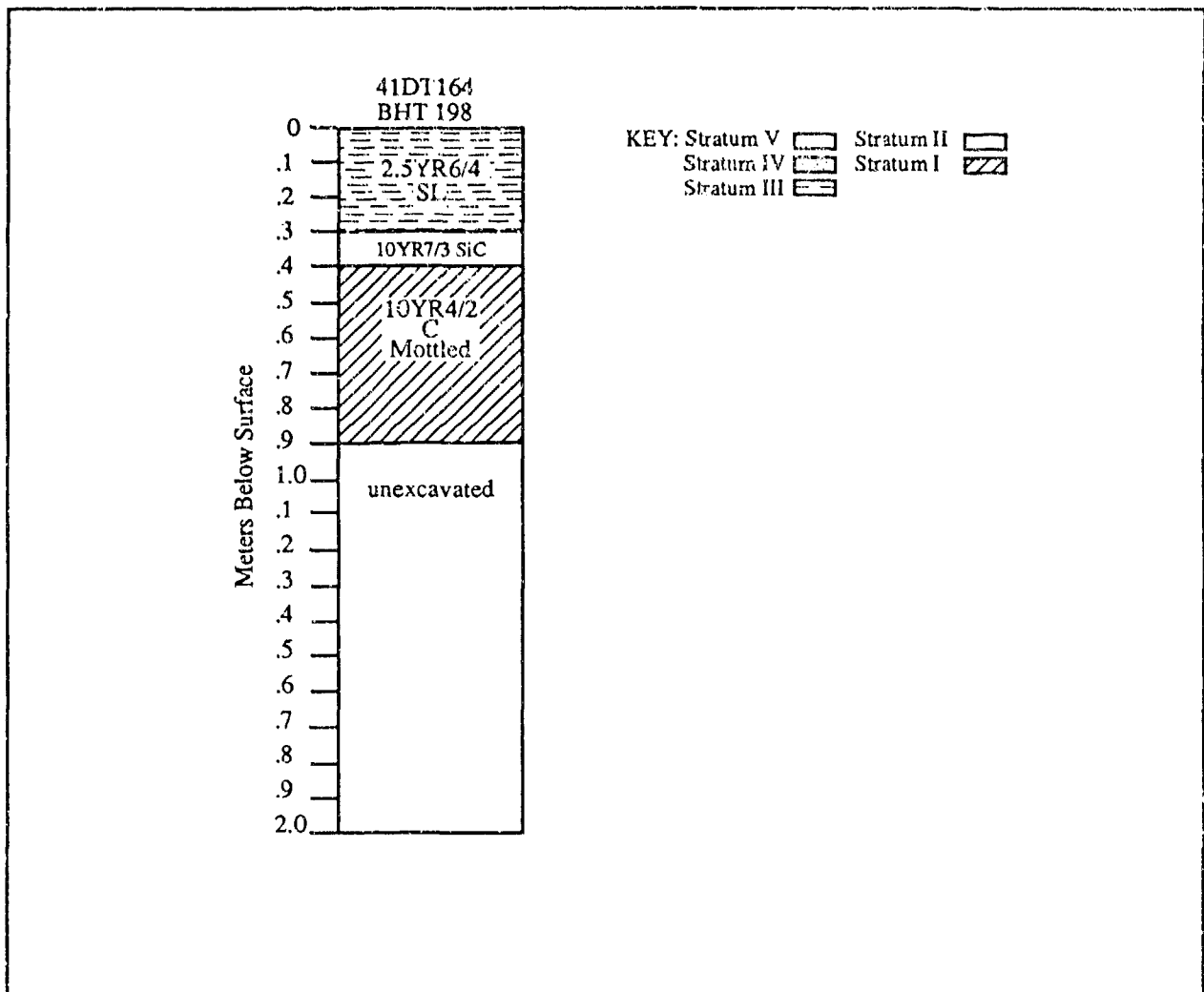


Figure 8-77. Stratigraphic profile of BHT 198 at site 41DT164.

one fire-cracked rock, one unworked cobble and one uniface were recovered from Shovel Test 6, 1-15 cm. Fifteen flakes, one (326 g) fire-cracked rock, one core, and one unworked cobble were recovered from Backhoe Trench 198. Surface collections yielded two bifaces, three unifaces, one flake, and three cores. One of the bifaces resembles the basal portion of a Gary point with resharpened shoulders, but there is so little remaining that this specimen cannot be accurately typed.

The site has been severely affected by erosion, Historic period land clearing, and agriculture. In portions of the site, erosional gullies are as deep as 1 m. Artifacts are in secondary deposits on the slopes of the site.

Prehistoric occupation of the site is attributed to the Late Archaic, as evinced by the presence of a possible Gary dart point. The site is thought to have been used for lithic reduction and/or short-term camping.

Recommendations

Because of the disturbed condition of the site and its low potential to yield significant data, it is thought to be clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

TABLE 8-14

Distribution of Artifacts at Site 41DT164,
Delivery Order Number 7 Study Area

Unit	Depth (cm)	Bifaces	Unifaces	Cores	Flakes	Cobbles	FCR	Total
BHT 198	14-30	—	—	1	15	1	1	18
Transect 2								
ST 7	0-15	—	1	—	1	—	—	2
ST 8	0-10	—	—	—	—	—	1	1
Transect 4								
ST 6	0-15	—	1	—	2	1	1	5
Surface	0	2	3	3	1	—	—	9
Total		2	5	4	19	2	3	35

Site 41DT165

This newly recorded prehistoric site (Figure 8-78) is located beneath and adjacent to a man-made flood levee 350 m (1,148 ft) north of the channelized Middle Sulphur River, and 680 m (2,230.4 ft) due east of F.M. 1531. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Kaufman clay. An unnamed intermittent creek flows 20-30 m (65.6-98.4 ft) south of the site. In its native state, this was a floodplain forest consisting of mixed hardwoods.

Stratigraphy

A single stratum was identified at this site locus. It is a very dark gray (10YR3/3) compact clay. The Kaufman clay is a homogenous clay with a deep A-horizon soil, extending to 160 cm below ground surface.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey. A scatter of

prehistoric artifacts was noted in pedestrian survey eroding out of the levee and channel (see Figure 8-78). No features were noted during survey. The site has been exposed by construction of the flood levee, and by excavations of an artificial channel through the site. During survey, flakes and fire-cracked rock were observed in the levee, channel, and disturbed areas at the site. A dirt road also crosses the site and has exposed cultural materials.

From the extensively disturbed areas of the site, 37 whole flakes, 24 broken flakes, three utilized flakes, one core, one small untyped dart point, four pieces of shatter, two late aborted bifaces, two biface fragments, fire-cracked rock, and shell were collected.

Recommendations

Based on the presence of a small, untyped dart point, occupation of the site is assignable to the Late Archaic period. Lithic reduction appears to have been a prime activity at the site. Extreme disturbance of the site has destroyed site integrity and any potential subsurface features. The extent of disturbance suggests that the site is clearly

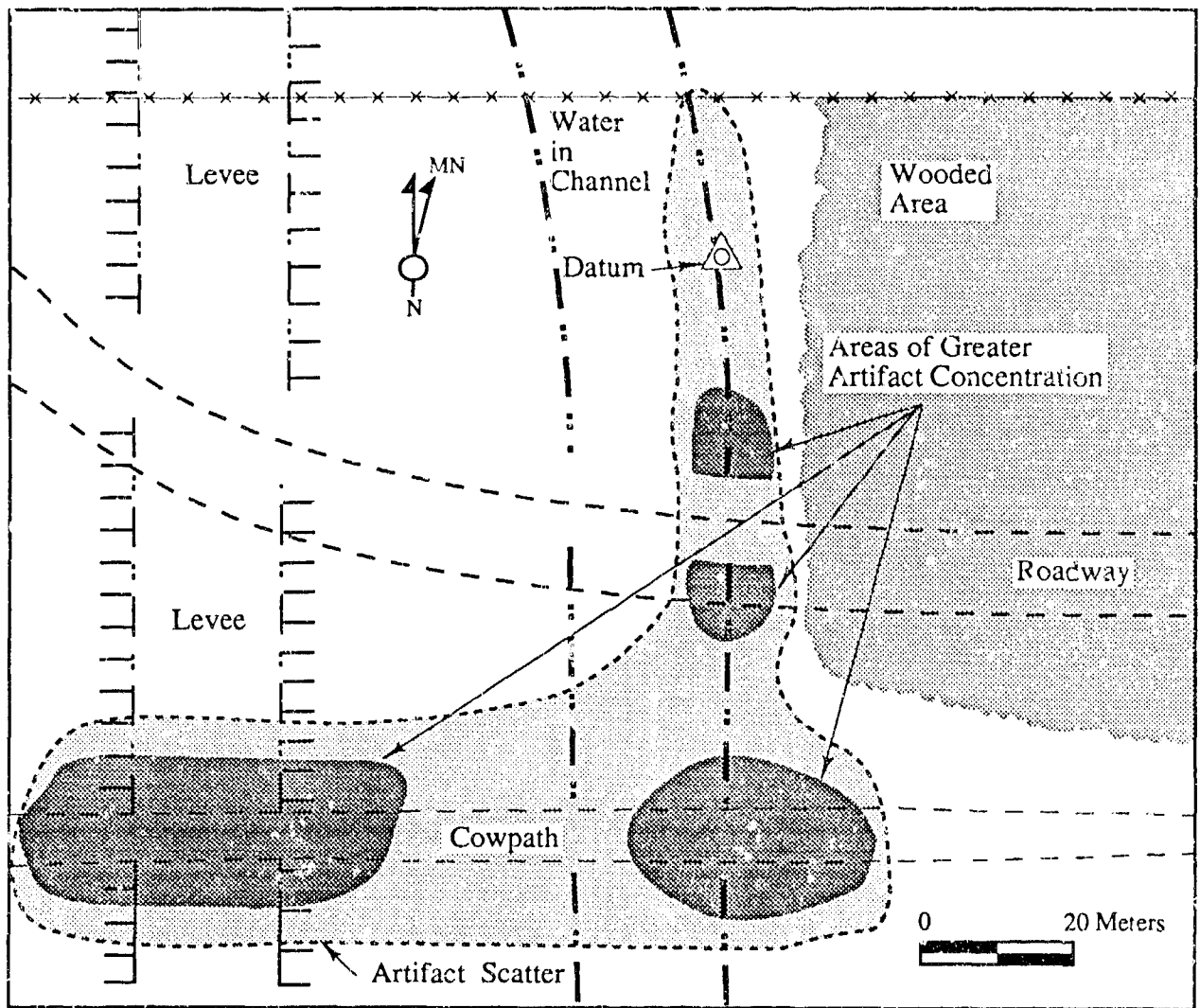


Figure 8-78. Plan of site 41DT165, showing locations of surface artifacts and land disturbances.

not eligible (Category III) for nomination to the National Register. No further work is recommended at the present time.

Site 41DT166

This site (Figure 8-79) is located on a slight rise in a relatively open area at the 137 m (450 ft) above msl contour. The site lies on Freestone-Hicota complex soil types which are characterized by pimple mounds. The South Sulphur River lies 900 m (2,982 ft) to the south. An intermittent drainage flows 20 m (65.6 ft) north of the site. Site 41DT10 is 300 m (984 ft) to the west, adjacent to the CE fence. In its native state, this was a post oak savannah.

Stratigraphy

A single soil stratum was identified at site 41DT167. This is a brown (10YR5/3) fine sandy loam with few yellowish brown (10YR5/4) mottles. Cultural materials were recovered from this stratum. It is continuous across the site, and has been truncated somewhat in areas by erosion.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey. A light scatter of prehistoric lithic artifacts was noted during pedestrian survey over a 3,000 m²

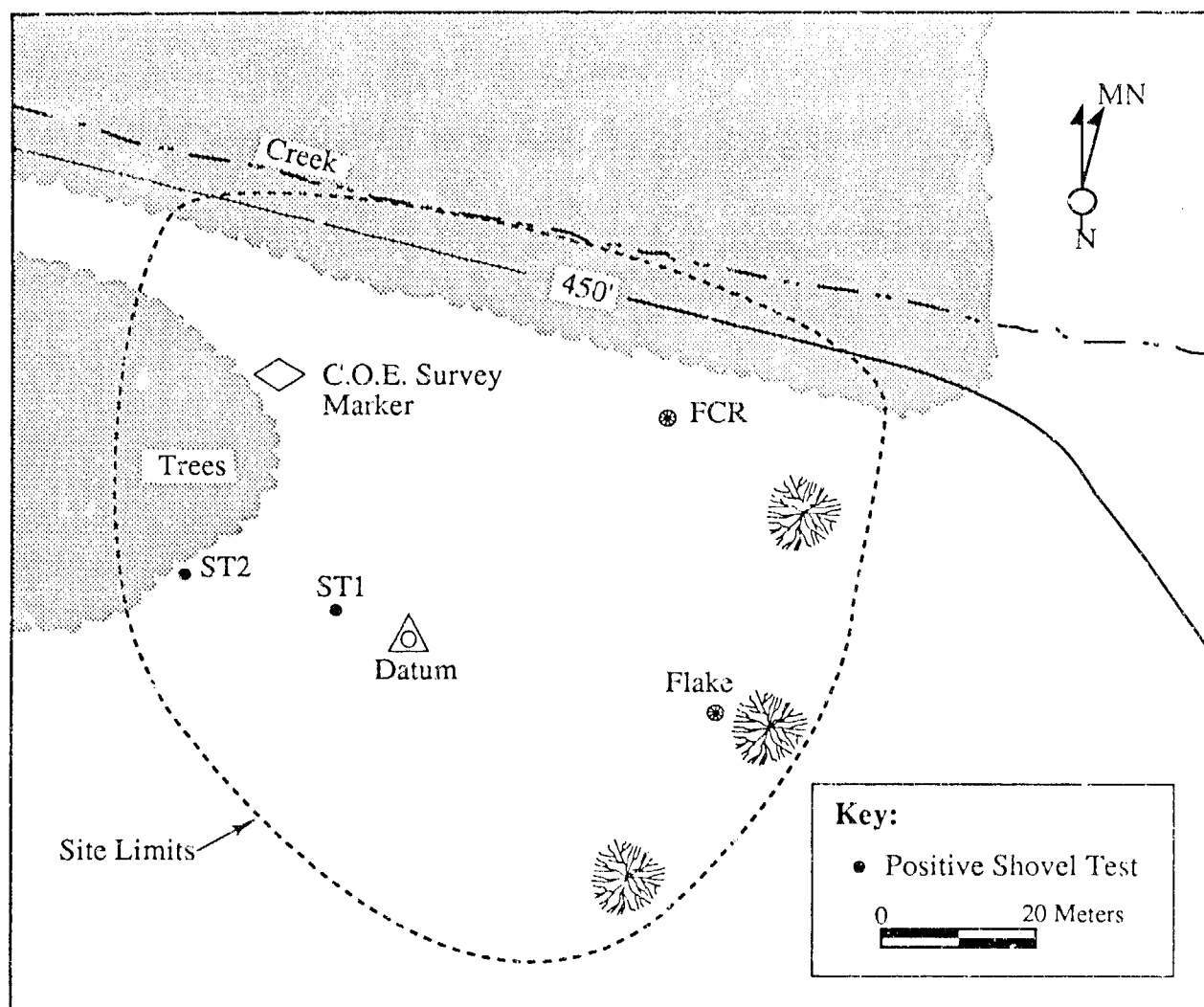


Figure 8-79. Plan of site 41DT166, showing locations of shovel tests and site limits as defined by surface artifacts.

(32,292 ft²) area. A non-controlled surface collection yielded one flake and one fire-cracked rock. No features were noted during survey. Two shovel tests were excavated. Shovel Test 1 yielded one flake 0-20 cm below surface. Shovel Test 2 yielded two fire-cracked rocks and a core 0-15 cm below surface.

Recommendations

Cattle ranching and erosion caused by the nearby creek have impacted the site. Based on this impact to this low-density site, it is judged to be definitely not eligible (Category III) for the National Register. If future information is found

that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended for the site at the present time.

Site 41DT167

This newly recorded prehistoric site (Figure 8-80) is located on a low rise above open pasture at an elevation ranging between 132 m (433 ft) and 134 m (440 ft) above msl. An unnamed east-flowing tributary of Johns Creek lies 145 m (475 ft) south of the site. The site is 1.28 km (0.79 mi) northeast of the Free Hope Church site. The mapped soil type is Normangee clay loam.

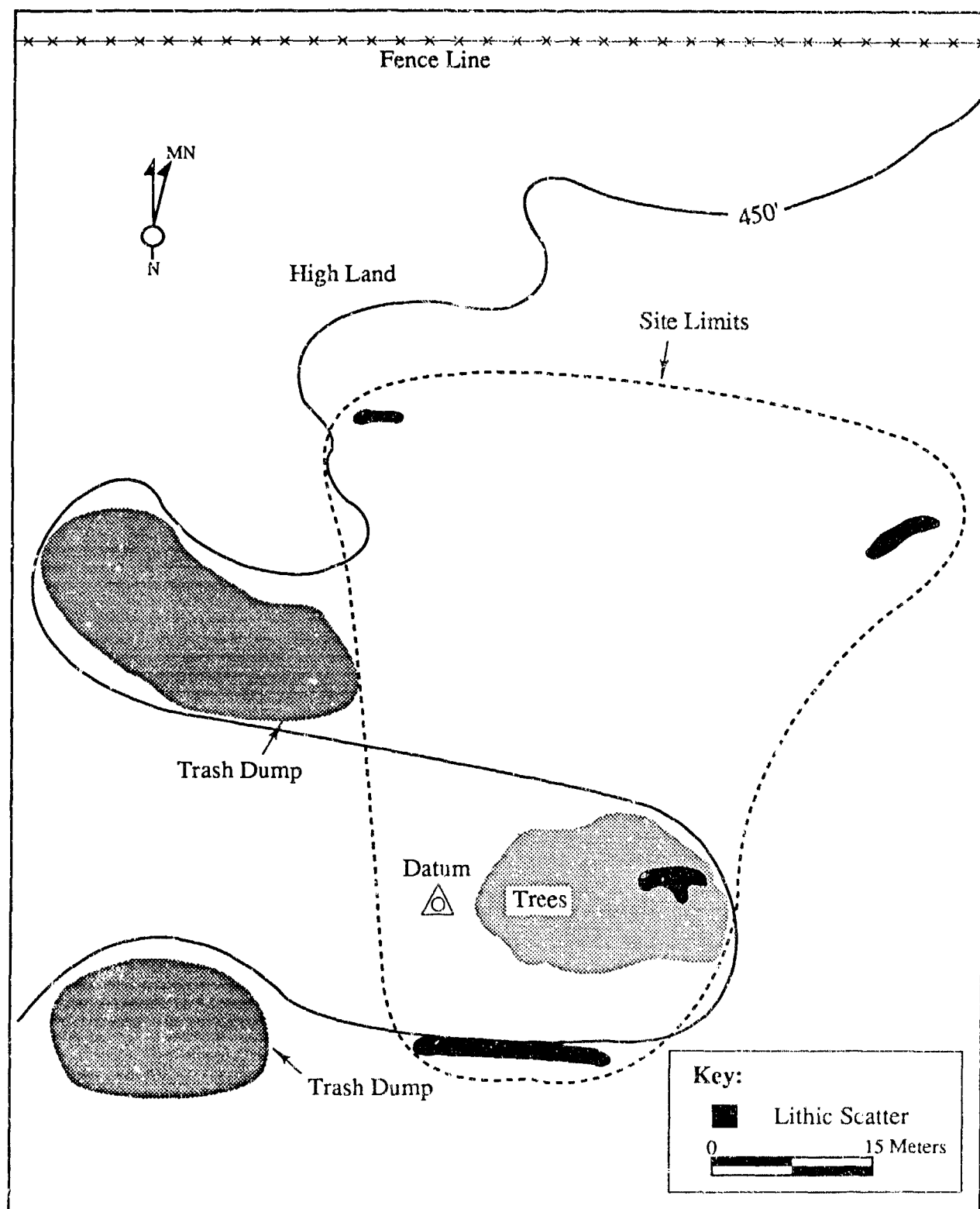


Figure 8-80. Plan of site 41DT167, showing locations of site datum, site limits, and Historic period trash dumps.

Stratigraphy

Three natural strata were identified in backhoe trench excavations (BHTs 198 and 199) in the same landforms several hundred meters north of site 41DT167. The strata in BHT 199 are discussed in order from oldest (lowest) to youngest (uppermost).

Stratum I is a dark gray (10YR4/1) clay with light reddish brown (2.5YR6/4) mottles. It has a gradual upper boundary at 63 cm below surface and was excavated to a maximum depth of 90 cm below surface. It is culturally sterile.

Stratum II is a pale brown (10YR6/3) silt loam. It has a gradual upper boundary at 20 cm below ground surface.

Stratum III is a dark grayish brown (10YR4/2) silt loam. It is assumed that all cultural materials are confined to this stratum since it is situated in an eroded, non-aggrading setting.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey. Artifacts were collected from erosional gullies over a 1,600 m² area. A single shovel test (35 cm x 35 cm x 15 cm) was excavated in the center of the surface scatter for the permanent datum. This unit was culturally sterile (see Figure 8-80). Artifacts collected include 36 whole flakes, 54 broken flakes, two core fragments, one tested cobble, and fire-cracked rock. No temporally diagnostic prehistoric artifacts were collected. The historic trash dumps at the site were generally less than 50 years old. Isolated older materials that were collected include a clear-glass bottle with a ground rim and a milk glass canning lid.

Recommendations

The site appears to represent a lithic reduction site of unknown prehistoric age. The site has been heavily and deeply eroded over 50% of its survey area. Also, it has been severely impacted by cattle ranching and use as a historic trash dump. Based on these impacts and low-density remains, the site is judged to be definitely not eligible (Category

III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT168

This prehistoric site (see Figure 8-57) is located on the northeast side of a rise along the southwest side of the Johns Creek floodplain. The site lies at an elevation of 137 m (450 ft) above msl on a Normangee clay loam soil. An unnamed, intermittent drainage which flows into Johns Creek is located 120 m (393.6 ft) southeast of the site. In its native state, this was an upland and slope prairie. A floodplain forest was located to the east. The area has been cleared and intensively cultivated. It is an eroded, fallow field today.

Stratigraphy

The single natural stratum identified within the confines of the site locus is horizontally continuous across the probed portion of the site. Vertically it occurs from ground surface and extends to a maximum depth of 40 cm (15.74 in) below ground surface. Stratum I is a very compact sticky clay loam that contains Uvalde gravel veneer deposits and a fallow field root system in its upper limits. It is devoid of internal stratification and has a dominant color of very dark gray (10YR3/1).

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey. The site consists of a lithic scatter in the eroded areas in a power line right-of-way (see Figure 8-57). A single shovel test (35 cm x 35 cm x 15 cm) was excavated for the site datum. The unit was culturally sterile. Artifacts recovered in surface collections include seven flakes, two core fragments, five fire-cracked rocks, and 5 g of fossilized shell. No cultural features were noted.

The site was revisited in March 1991 and additional shovel testing was conducted. No

diagnostic Historic or Prehistoric period artifacts were recovered from the site at that time. However, the Uvalde gravel deposits at the site suggest selective quarrying activities at some indeterminate time(s) in the past. This activity is reflected by numerous bilaterally fractured cobbles and pebbles which were apparently broken to determine their internal texture, homogeneity and, hence, suitability for subsequent reduction and tool manufacture. The large Uvalde gravel deposit, although of much lower density than some areas in Hopkins County, may represent a prehistoric cultural feature based on evidence of quarrying activities noted during pedestrian reconnaissance.

Recommendations

The site has been impacted by the clearing of a power line right-of-way. The additional cultural resource management investigations undertaken at 41DT168 defined a single natural stratum. Prehistoric artifacts recovered from the site during our investigations most likely represent quarrying activities of the Uvalde gravel veneer that comprise the main element of the site and an area spread widely to the west. The prehistoric landform is only partially preserved due to extensive erosion and arroyo cutting. Based upon the negative results of the pedestrian reconnaissance, it is unlikely that cultural resources are preserved within the defined boundaries of the study area. Accordingly, the site is classified as Category III, and no further investigation is recommended.

Site 41DT169

This newly recorded prehistoric site (Figure 8-81) is located on a gently-sloping, south-facing terrace 200 m (656 ft) east of Johns Creek. The site is 2.5 km (1.6 mi) north of Klondike. Elevation of the site is 137 m (450 ft) above msl, and the mapped soil type is Deport clay. A stock pond lies on the edge of the site. In its native state, this was a floodplain forest with a slope and upland prairie to the east. This area has been cleared, intensively cultivated, and terraced in the past. It is in fallow field today.

Stratigraphy

Two natural strata were identified within the confines of the site locus. These are described from oldest (lowest) to youngest (uppermost).

Stratum I is horizontally continuous across the probed portion of the site. Vertically it occurs at a mean depth of 40 cm (15.74 in) below ground surface and extends to a maximum excavated depth of 60 cm (23.62 in) below ground surface. Stratum I is a culturally sterile, very fine, water-saturated silt lacking internal stratification. It is devoid of pebbles, gravel, and stones. The dominant color is very dark gray (10YR3/1).

Stratum II is horizontally continuous across the probed portion of the site. Vertically, it occurs from ground surface to a maximum depth of 40 cm (15.74 in) below ground surface. Stratum II is a compact silty clay with silt laminae appearing at 20-26 cm (7.87-10.23 in) below ground surface, and fallow field root systems in its upper limits. It is devoid of pebbles, gravel, and rock fragments. Its dominant color is very dark grayish brown (10YR3/2).

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey. Flakes were observed in an area disturbed by stock pond construction (see Figure 8-81). Four flakes were collected near the stock pond and others were noted in a 900 m² area. A single shovel test (35 cm x 35 cm x 15 cm) was excavated for the site datum. This unit was culturally sterile. The site was revisited in March 1991, and additional shovel testing was conducted. No temporal or culturally diagnostic artifacts were recovered from the surface or shovel tests.

Recommendations

As no temporal diagnostics were collected, the site is interpreted to be of unknown prehistoric age. It is interpreted as a lithic reduction site. No historic or prehistoric artifacts were recovered during the pedestrian reconnaissance or

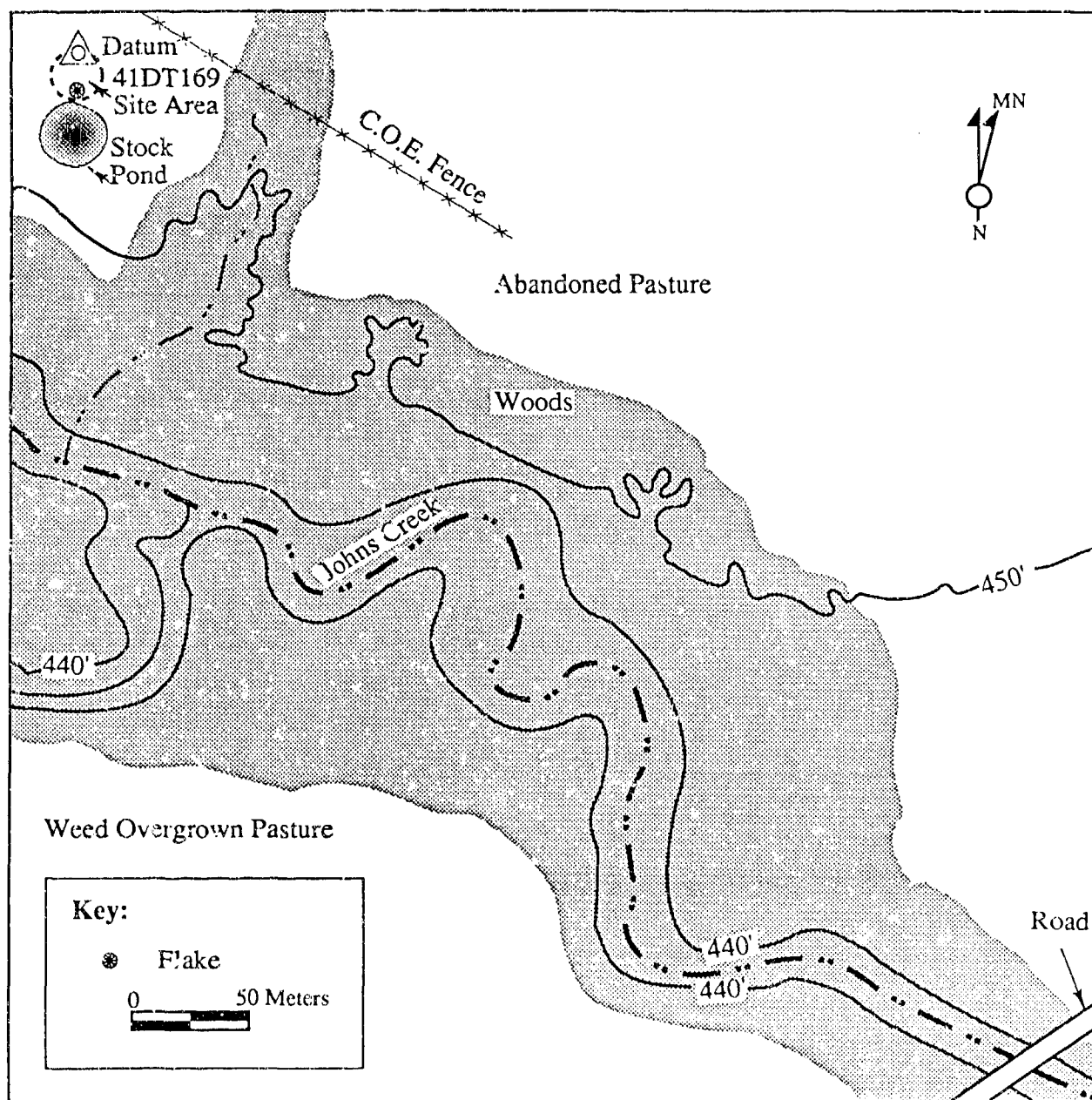


Figure 8-81. Plan of site 41DT169, showing locations of site limits (as defined by surface artifacts), site datum, and land modifications.

subsurface testing. Based upon these negative results, it appears very little unlikely that potentially significant cultural resources are preserved at this locality. Accordingly, site 41DT169 is classified as Category III, and no further cultural resource investigations are recommended.

Site 41DT170

This newly recorded prehistoric site (Figure 8-82) is located east of Doctors Creek on a gentle southwest-facing slope. Doctors Creek is located 350 m to the southwest, and F.M. 24 is 350 m (1,148 ft) north of the site. Elevation of the site

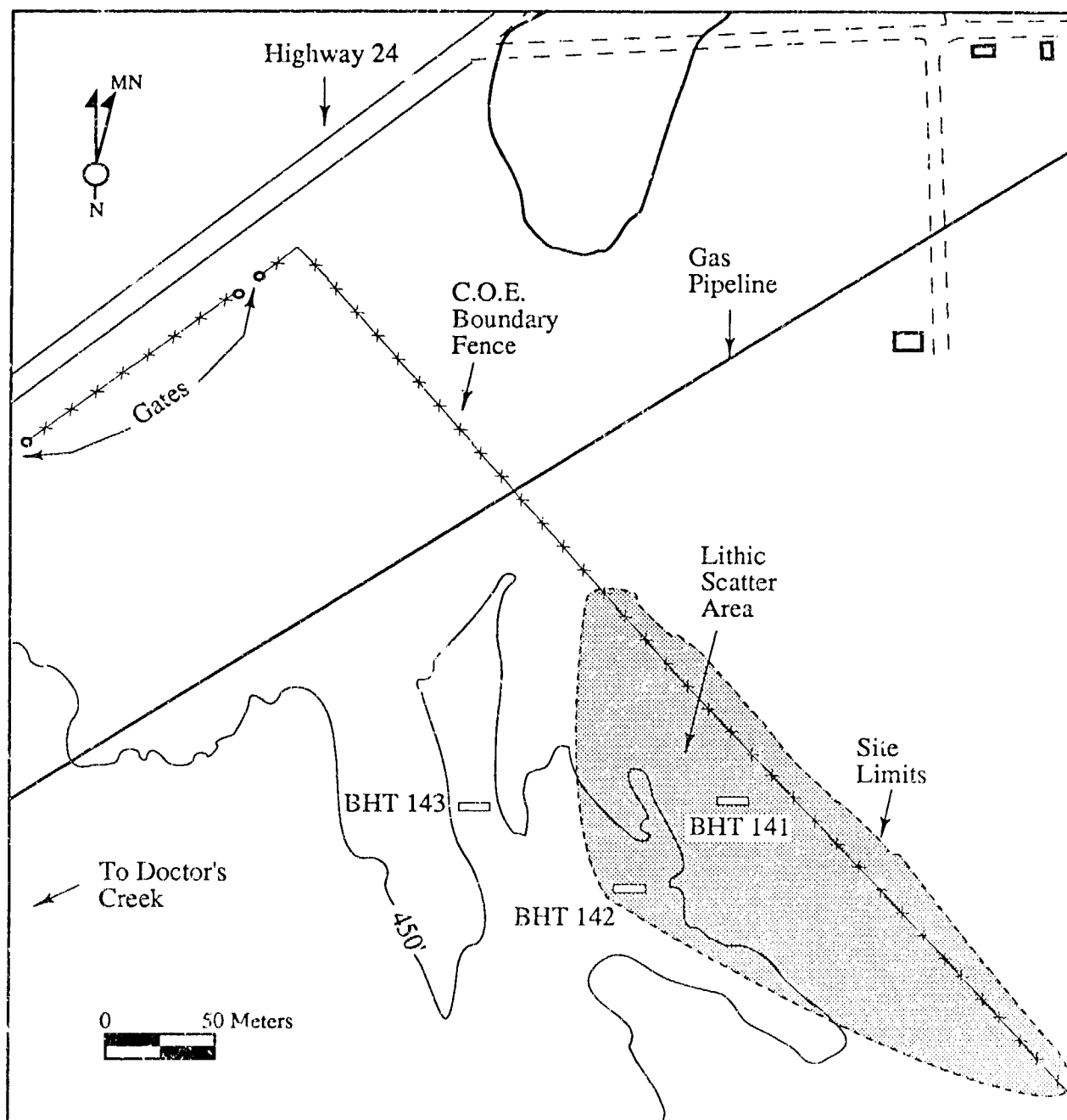


Figure 8-82. Plan of site 41DT170, showing site limits (as defined by surface artifacts) and locations of BHTs 141, 142, and 143.

varies between 137 m (450 ft) and 138.3 m (454 ft) above msl. The mapped soil type for the site is Kaufman clay. The CE boundary fence crosses the site in a northwest-southeast direction. In its native state, this area was a post oak savannah.

Stratigraphy

Three natural strata were identified in BHT 141, which was excavated within the confines of 41DT170 (Figure 8-83).

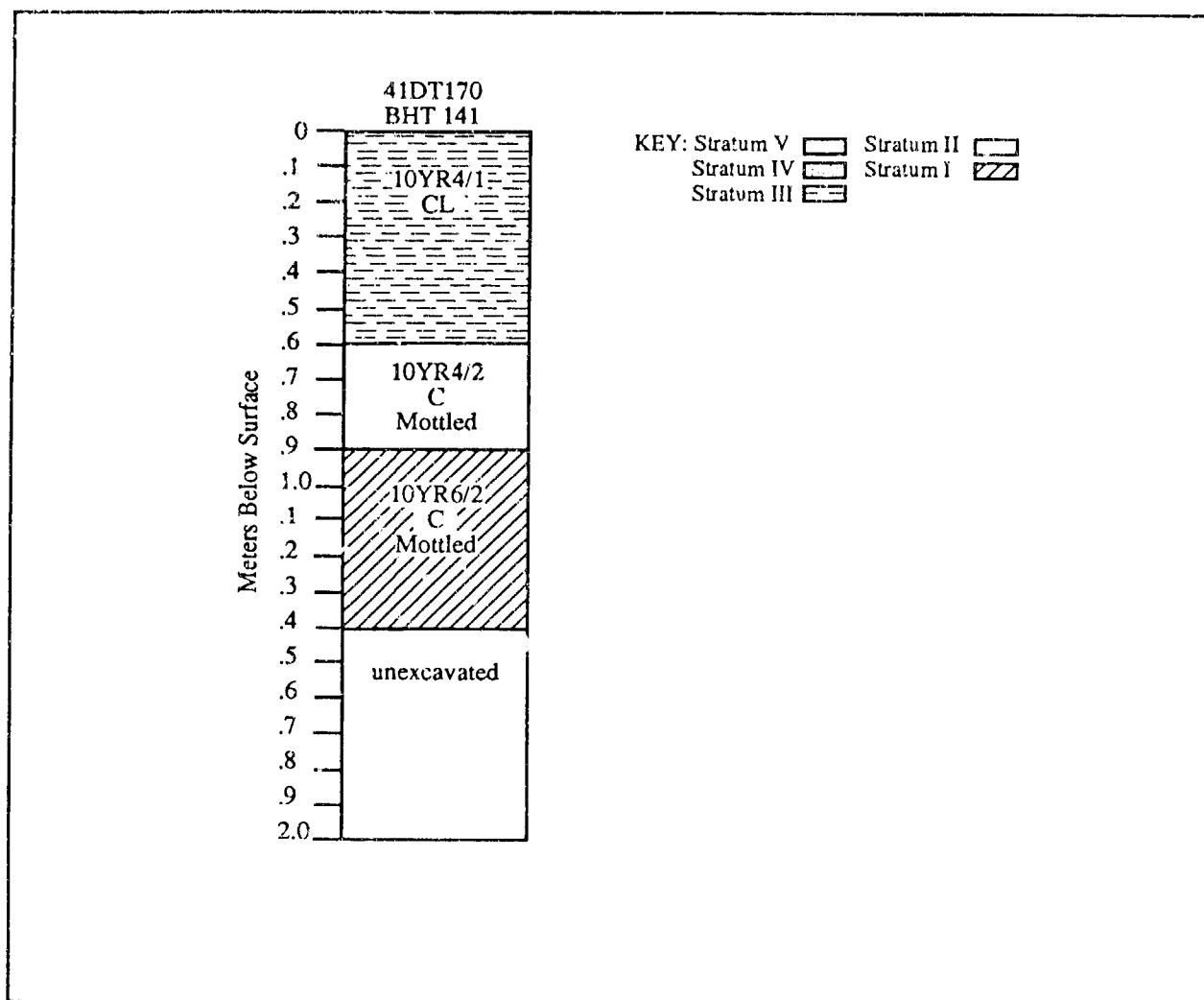


Figure 8-83. Stratigraphic profile of BHT 141 at site 41DT170.

Stratum I is a gray (10YR6/2) clay with light brownish gray (2.5Y6/2) and yellowish red (5YR5/8) mottles. Calcium carbonate concretions, indicative of fluctuating water regimes, are common. It has a diffuse upper boundary at 80 cm below ground surface and was excavated to a maximum depth of 1.4 m below surface. Stratum I is culturally sterile.

Stratum II is a dark gray (10YR4/2) clay with light brownish gray (2.5Y6/2) and yellowish red (5YR5/8) mottles. Small water-worn pebbles and calcium carbonate concretions are present. It has a gradual upper boundary at 60 cm below ground surface. Cultural materials are restricted to the upper boundaries of this stratum, with one flake at 75 cm and one flake at 50 cm below ground

surface. These items may actually be intrusive, possibly due to bioturbation, from lower portions of Stratum III.

Stratum III is the surface soil horizon. It is a dark gray (10YR4/1) clay loam. Cultural materials (flakes, fire-cracked rock, and bone) were mapped in the walls of BHT 141 and occurred ca. 10-46 cm below ground surface.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. Machine excavations were also employed to evaluate this site. A single shovel test

(25 cm x 25 cm x 30 cm) was excavated, but was sterile. A permanent datum was placed in this unit.

An extremely dense lithic scatter was observed in a disturbed area near the CE boundary fence (see Figure 8-82). Surface collections recovered 47 flakes, three crude bifaces, two cores, five core fragments, and three fire-cracked rocks.

Three backhoe trenches (i.e., BHTs 141, 142, and 143) were excavated in the vicinity of 41DT170 (see Chapter 6, Doctors Creek). Backhoe Trench 141 yielded the majority of remains from the site. The deepest items include a flake at 65 cm, a bone fragment at 46 cm, and three flakes at 35-50 cm below ground surface. Four flakes and one fire-cracked rock were retrieved from 20-30 cm below surface. The remaining items include two flakes and a fire-cracked rock which were recovered from 10-20 cm below surface. No artifacts were noted between 0-10 cm below surface. In BHT 142, only three items were present. These include a point tip at 7 cm, a fire-cracked rock at 8 cm, and a core fragment at 17 cm below surface. BHT 143, located 112.5 m (369 ft) southwest of the boundary fence, was sterile. The site extends northeast of the fence at least 20 m (65.6 ft)

onto private land. A significant amount of the site on CE property is thought to be redeposited from beyond the boundary fence.

The total artifact assemblage from the site consists of 22 whole flakes, 22 broken flakes, five utilized flakes, three cores, four core fragments, one early aborted biface, two biface fragments (Figure 8-84), one dart point base, and three pieces of fire-cracked rock. The dart point base fragment found at the site resembles a Cossatot River point (see Figure 8-84). However, since the point is broken, it cannot be accurately typed. It is made of nontocal white chert. It is corner notched, and has a slight bifurcation in its base. A perforator was also recovered from this site.

Recommendations

The absence of other temporally diagnostic artifacts from the 41DT170 hinders precise estimates of the site's occupation. The artifact assemblage suggests that this locality represents an undifferentiated Archaic site at which lithic reduction was a major activity. Based on the present level of information, this site may be potentially eligible for nomination to the National Register (Category II).

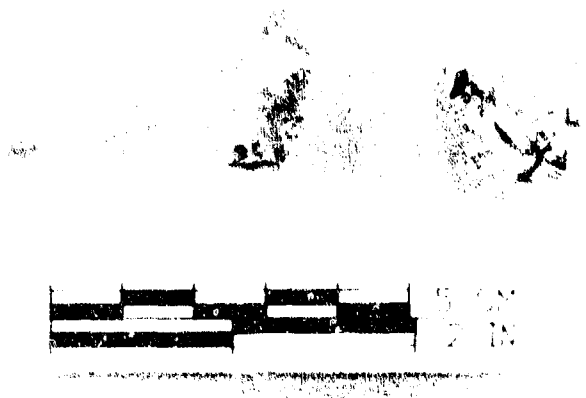


Figure 8-84. Flaked stone artifacts from site 41DT170, Delivery Order Number 7 study area (left-right): untyped dart point fragment (surface), biface fragment (surface), biface fragment (surface).

Site 41DT171

This unique prehistoric or possible historic find (Figure 8-85) is located 500 m (1,640 ft) west of Doctors Creek and 800 m (2,624 ft) north-northeast of the old Liberty Grove Cemetery. Cannon Creek lies 750 m (2,460 ft) to the east. Elevation of the site is 134 m (440 ft) above msl, and the mapped soil type is Wilson silt loam. In its native state, this was an upland prairie.

Stratigraphy

Two natural soil strata were identified in the vicinity of the site in BHT 155 (not illustrated). These strata are described in order from oldest (lowest) to youngest (uppermost).

Stratum I is a very dark gray (10YR3/1) clay. It has an indistinct boundary at 70 cm below surface and was excavated to a maximum depth of 1.5 m below ground surface. It is culturally sterile.

Stratum II is also a very dark gray (10YR3/1) clay, but has gray (10YR6/1) mottles. This is the surface horizon. It is also culturally sterile.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey. A single shovel test (35 cm x 35 cm x 15 cm) was excavated for the site datum. This unit was culturally sterile. The locality consists of an isolated, whelk shell interior fragment found at the intersection of a north-trending pasture access road and a west-trending dirt road (see Figure 8-85). This shell was identified through comparison to specimens in Hall (1981) and Steele (1987). The nearest source for the shell is the Texas Gulf Coast, which is 400 km (249 mi) from the project area. Backhoe Trench 155 was placed near the surface find, 20 m southwest of the road intersection. It was excavated to a depth of 1.5 m, but it proved to be culturally sterile. An intensive surface inspection of the surrounding area failed to recover any other artifacts.

Examination of marine shell artifact distribution maps in Hall (1981:Figure 49)

indicates that these items have not been reported for northeast Texas, generally, or Cooper Lake, specifically. Virgil McFadden, an avocational artifact collector from Paris, Texas, reports a whelk shell find from the gravel of Auds Creek, in Lamar County, ca. 18 mi (29 km) northeast of the site. Such finds are unusual and out of primary context, but do suggest trade or exchange with the Gulf Coast.

Recommendations

The age of the shell is unknown, and the site is tentatively classified as being of unknown prehistoric age. The shell is an isolated find and, although unique, clearly not eligible for nomination to the National Register (Category III) because it fails to meet the criteria of significance. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT172

This newly recorded prehistoric site (Figure 8-86) is located on an east-facing slope in upland pasture 200 m (656 ft) west of Cannon Creek and 1.2 km (0.75 mi) north of Doctors Creek. The site lies 300 m (984 ft) east of FM 1880. The site area is 900 m² (9,687.6 ft²). Elevation at the site is 135.6 m (445 ft) above msl, and the mapped soil type is Annona loam. In its native state, this was a post oak savannah adjacent to an upland prairie.

Stratigraphy

Four natural strata were identified in BHT 156, excavated in the general vicinity of 41DT172. These are discussed in order from oldest (lowest) to youngest (uppermost).

Stratum I is a very dark grayish brown (10YR4/2) clay with light gray (10YR7/1) mottles. It has a gradual upper boundary at 120 cm below surface and was excavated to a maximum depth of 145 cm below ground surface. It is assumed to be continuous across the site area and is culturally sterile.

Stratum II is a very dark gray (10YR3/1) clay with light yellowish brown (2.5Y6/4) mottles. It

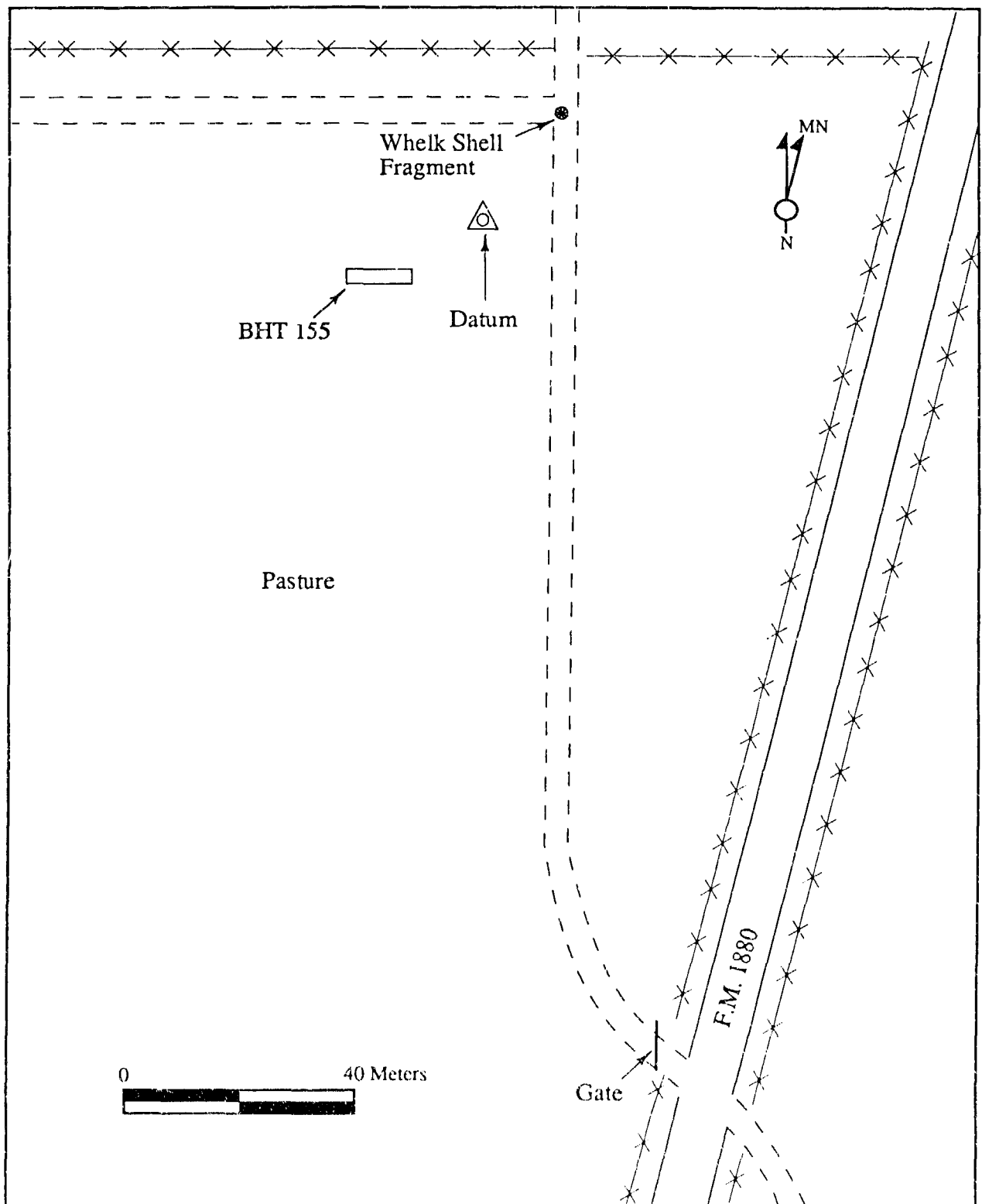


Figure 8-85. Plan of site 41DT171, an isolated artifact find, showing the locations of site datum, BHT 155, and surface features.

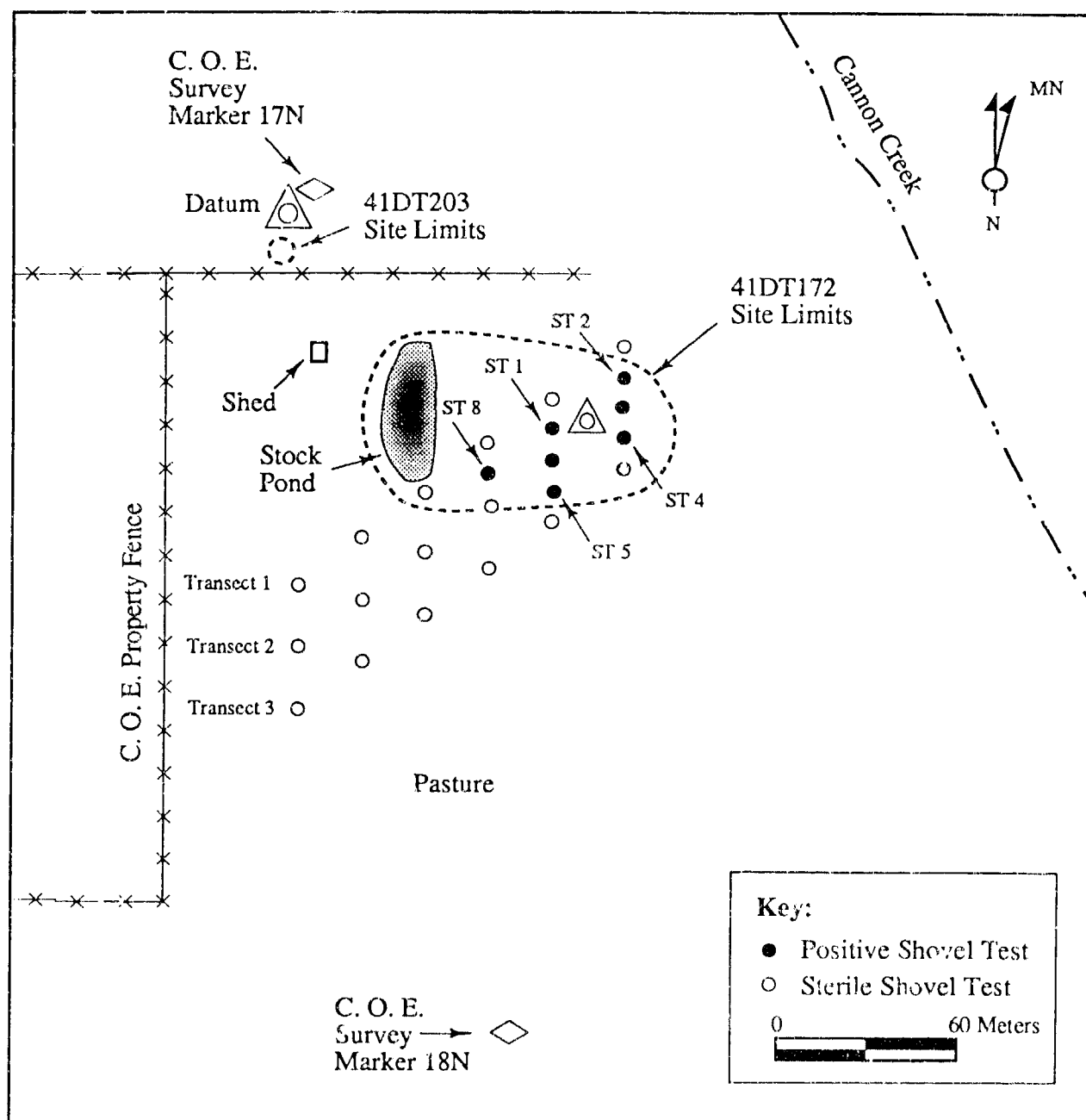


Figure 8-86. Location of surface features and shovel tests at site 41DT172. Note site 41DT203 immediately to the northwest.

has a gradual upper boundary at 60 cm below surface. It is culturally sterile.

Stratum III is a dark grayish brown (10YR4/2) silt loam with light gray (10YR7/1) mottles. It has a gradual upper boundary at 40 cm below ground surface. It is culturally sterile.

Stratum IV is the A-horizon soil. The A2-horizon is a very dark grayish brown

(10YR4/2) silt loam that is culturally sterile. The A1-horizon contains the only cultural material at site 41DT172, from 0-10 cm below surface.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included

close interval (5 m) pedestrian survey and shovel testing. The shovel testing program at site 41DT172 consisted of the excavation of 24 shovel test units at 20 m intervals arranged in three transects 20 m apart (see Figure 8-86). These transects were designed to explore the low knoll landform, as specified in Delivery Order Number 7. Excavation units ranged from 30 cm x 30 cm to 50 cm x 50 cm and were excavated to 10-35 cm below ground surface. Seventeen of these units were sterile and seven yielded cultural materials. Table 8-15 lists the units and levels that yielded artifacts. In all, 53 artifacts were recovered from both surface (n=25) and subsurface contexts (n=28). All flaked stone materials were Ogallala quartzite. No artifacts were recovered deeper than 10 cm below ground surface.

This shallow site is confined to the silty loam A-horizon. During previous investigations of this area, two flakes were found at Locality 2 in historic surface scatter. Locality 2 lies 150 m east of site 41DT172. Additionally, one fire-cracked rock fragment was found at site 41DT203, ca. 60 m northwest of the site.

TABLE 8-15

Distribution of Artifacts from Site 41DT172,
Delivery Order Number 7 Study Area

Transect	Depth (cm)	Unifaces	Flakes	FCR n (g)	Tot.
Transect 1					
ST 1	0-10	--	9	—	9
ST 2	0-10	—	1	—	1
ST 4	0-10	—	1	1 (6)	2
ST 5	0-10	—	2	4 (46)	6
ST 8	0-10	—	2	—	2
Transect 2					
ST 6	0-10	2	4	1 (6)	7
ST 7	0-10	—	1	—	1
Surface	0	—	22	3 (35)	25
Total					
		2	42	9 (91)	53

Recommendations

No temporal diagnostics were found at the site, and it is classified as being of unknown prehistoric age. Site function is related to lithic reduction. Due to the stock tank disturbance and the scattered, low-density remains, this site is judged to be definitely not eligible (Category III) for the National Register because it fails to meet the criteria of significance. The lack of deeply buried cultural materials, culturally or temporally diagnostic artifacts, and faunal or floral remains indicates that the site has low potential to address subsistence or material culture research questions. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT173

This newly recorded prehistoric site (Figure 8-87) is located 100 m (328 ft) south of the old Middle Sulphur River channel, in an abandoned floodplain pasture. The site is 350 m (1,148 ft) west of F.M. 1531. Elevation of the site is 137 m (450 ft) above msl, and the mapped soil type is Kaufman clay. In its native state, this was a floodplain forest.

Stratigraphy

A single soil stratum was identified at this site locus. This is a black (10YR2/1) clay. It was excavated to a maximum depth of 20 cm. The only cultural materials were recovered 0-5 cm below surface.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, mapping, and shovel testing (see Figure 8-87). A scatter of lithic artifacts and fire-cracked rocks or shattered cobble fragments covering ca. 3,000 m² was noted on the surface during pedestrian survey. Twenty shovel tests placed at 20 m intervals were excavated across the landform. Only two of these tests yielded artifacts. In Transect 3, Shovel Test

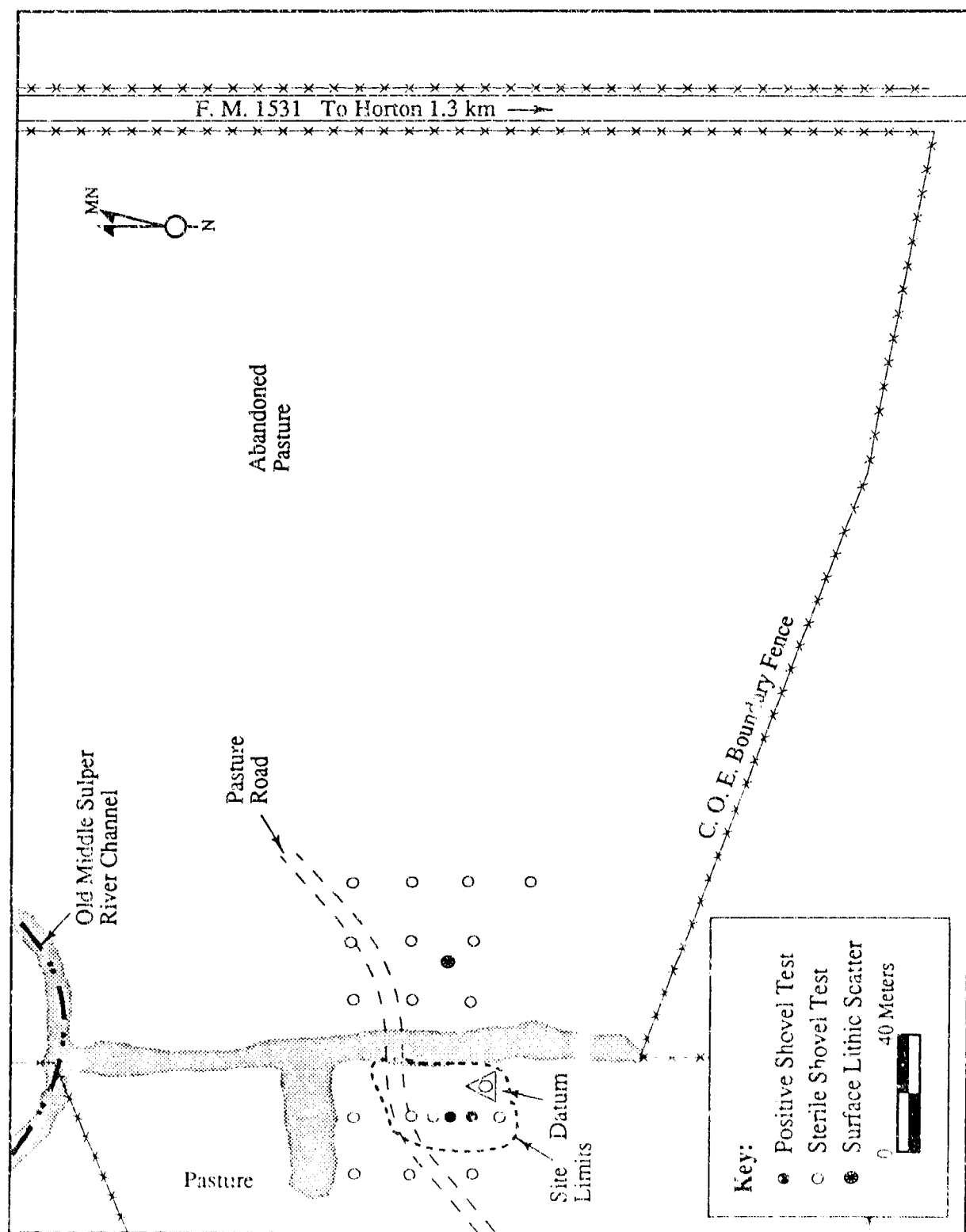


Figure 8-87. Plan of site 41DT173, showing locations of shovel tests, site limits (as defined by surface artifacts and positive shovel tests), and surface features.

5 yielded one flake, one core, and one fire-cracked rock from 0-5 cm below surface. A second unit placed between Transect 3 and Transect 2, 10 m north of Shovel Test 5, yielded a single flake from 0-5 cm below ground surface.

Recommendations

The site appears to be a low-density camp of unknown prehistoric age. It is thought to be clearly not eligible (Category III) for nomination to the National Register. The site's shallow, low-density deposits and the absence of diagnostic artifacts reduce its potential to address the material cultural, chronological, and settlement questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT174

This newly recorded prehistoric site (Figure 8-88) is located on a terraced slope 250 m (820 ft) south of Doctors Creek and 270 m (885.6 ft) north of FM 1528, 200 m (656 ft) south of the Southern Pacific Railroad. Elevation of the site varies between 137 m (450 ft) and 140 m (460 ft) above msl. The mapped soil type at the site is Heiden clay. In its native state, this was a post oak savannah.

Stratigraphy

Four natural strata were identified in BHT 170, which was excavated within the limits of site 41DT174 (Figure 8-89).

Stratum I is a light gray (10YR7/1) clay with red (2.5YR4/8) mottles. It has a gradual upper boundary at 70 cm below surface and was excavated to a maximum depth of 85 cm below ground surface. It is assumed to be continuous across the site locus and is culturally sterile.

Stratum II is a gray (10YR5/1) clay with red (2.5YR4/8) mottles. It has a gradual upper boundary at 40 cm below surface and is culturally sterile.

Stratum III is a very dark grayish brown (10YR3/2) compact clay loam. It has a gradual upper boundary at 20 cm below ground surface and cultural materials extend to the upper 5 cm of this stratum.

Stratum IV is a dark grayish brown (10YR4/2) silt loam. This is the surface soil horizon. Cultural materials are concentrated in this stratum.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, mapping, and shovel testing. The site appears to have been plowed and terraced in the past, and suffers from erosion today. A surface scatter of flakes, fire-cracked rock, and tested cobbles was noted in a 5,000 m² area (see Figure 8-88), which extends to the southwest, outside of the Delivery Order Number 7 study area. Testing of the site was accomplished by excavating 37 shovel tests (25 of which were positive) and one backhoe trench. All cultural materials were confined to the upper 20 cm of the site deposits (Table 8-16).

The proximity of the railroad to this site has apparently introduced some historic materials into the cultural deposits. The historic artifact assemblage consists of 11 items, including nine coal cinders, one clear bottle glass fragment, and one unidentified large mammal bone fragment.

Recommendations

The testing program at 41DT174 indicated that substantial deposits exist at the site locus, even though no culturally or temporally diagnostic artifacts were recovered. Shell and charcoal are also present, indicating that data relating to subsistence and chronology may potentially be available from the site.

The site is judged to be of unknown (Category II) National Register eligibility. Further work may be necessary to adequately evaluate its potential to address the subsistence, material culture, and chronological questions outlined in the Research Design.

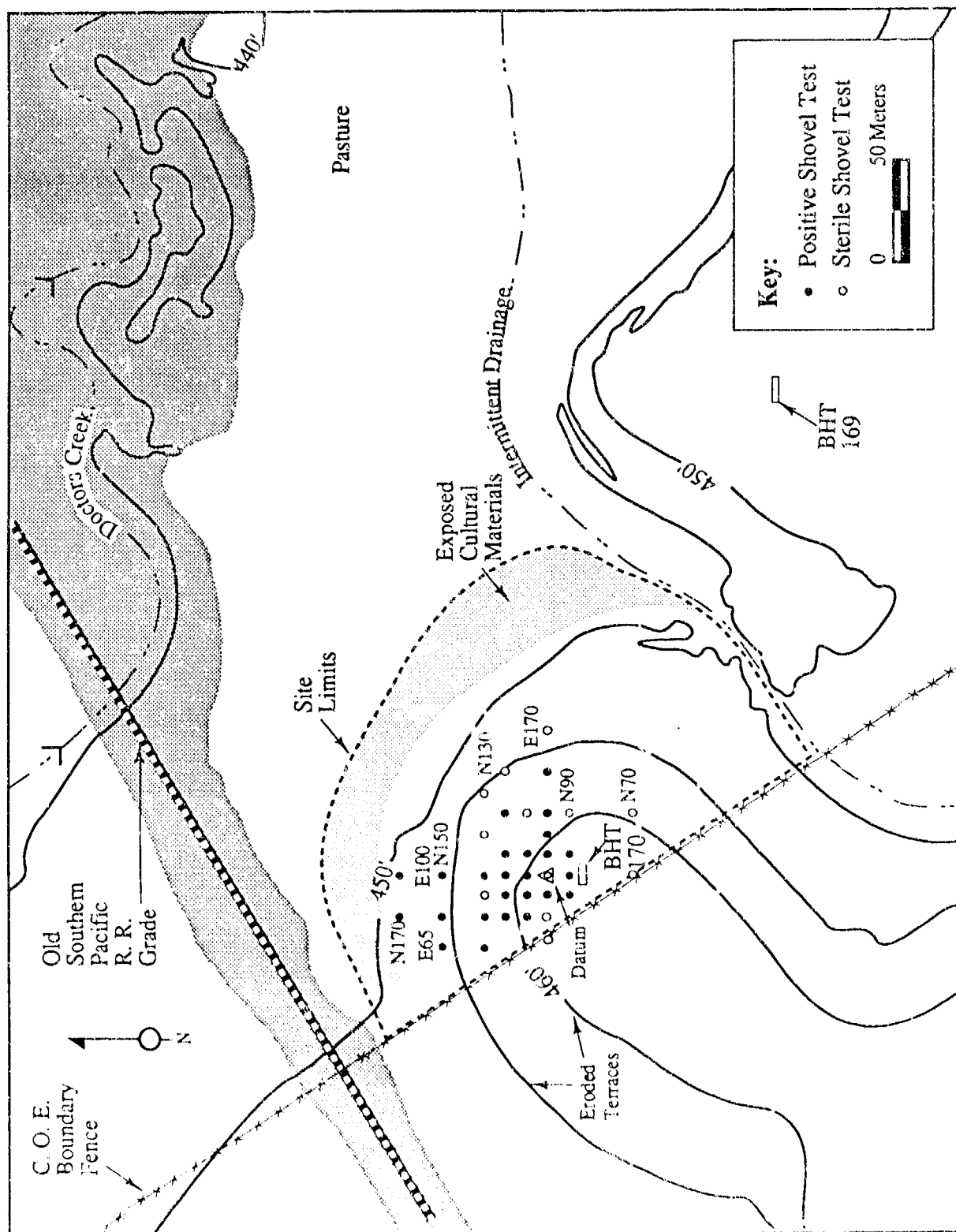


Figure 8-88. Plan of site 41DT174, showing locations of surface artifacts, shovel tests, BHTs 169 and 170, site limits, and land modifications.

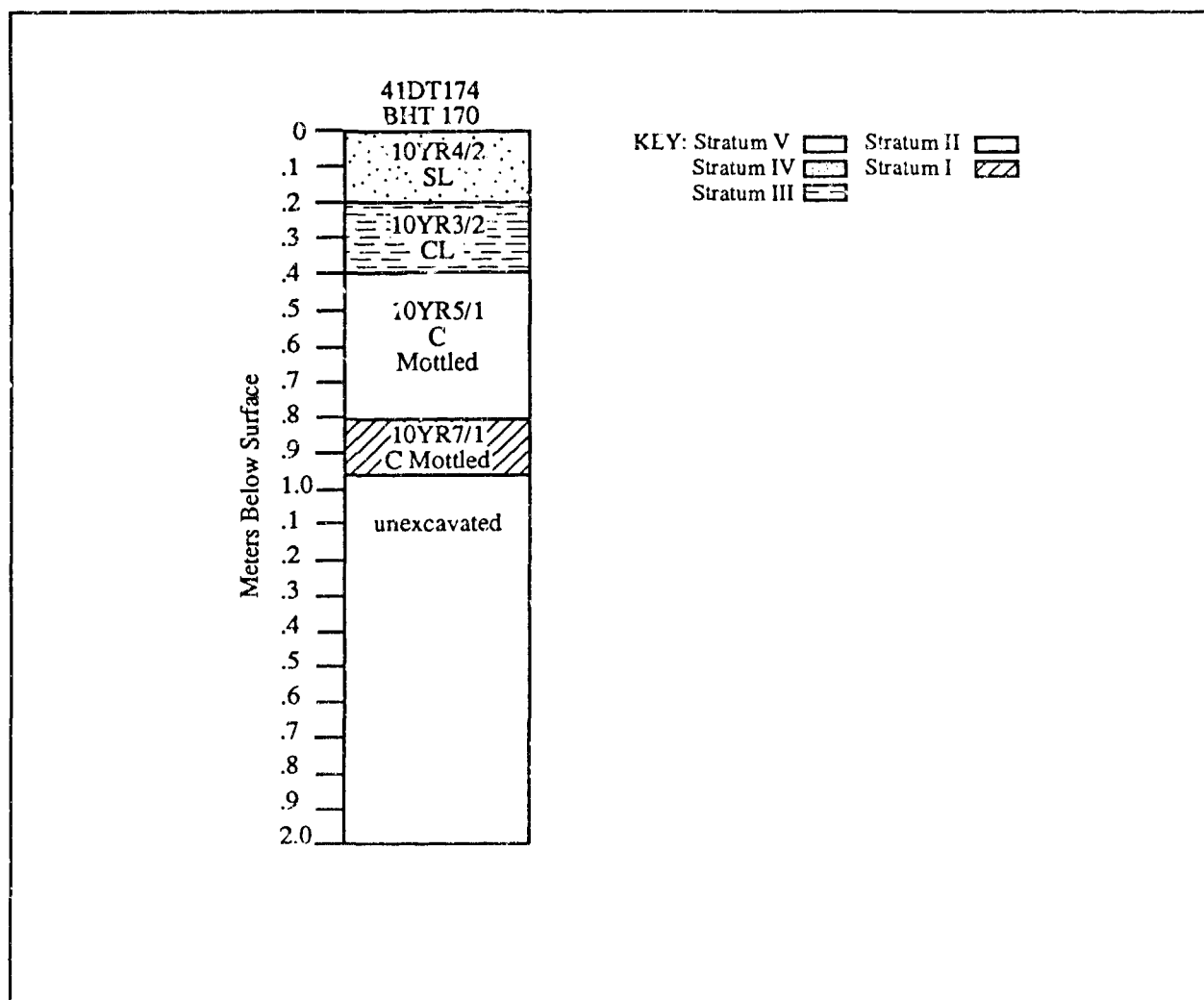


Figure 8-89. Stratigraphic profile of BHT 170 at site 41DT174.

TABLE 8-16

Distribution of Prehistoric Artifacts from Site 41DT174,
Delivery Order Number 7 Study Area

Provenience	Depth	Bifaces	Util. Flakes	Cores	Flakes	FCR n	Shell n (g)	Charcoal n (g)	Total
BHT 170	0-10	---	15	6	30	29	---	---	80
N70E100	0-10	---	---	---	4	3	1 (1.0)	---	8
N90E90	0-10	---	---	1	7	1	---	---	9
N90E100	0-15	1	---	---	7	9	---	---	17
N90E110	0-10	---	---	2	4	---	---	---	6
N100E90	0-10	---	1	1	---	1	---	---	3
N100E110	0-10	1	2	---	5	6	---	---	14

TABLE 8-16 (cont.)

Provenience	Depth	Bifaces	Util. Flakes	Cores	Flakes	FCR n	Shell n (g)	Charcoal n (g)	Total
N100E120	0-15	1	2	—	4	3	—	—	10
N100E130	0-15	—	—	—	6	2	—	—	8
N100E150	0-15	—	—	—	2	—	—	—	2
N110E80	0-15	—	1	—	—	—	—	—	1
N110E90	0-15	—	—	2	4	3	—	—	9
N110E100	0-15	—	—	—	6	6	—	—	12
N110E110	0-20	—	—	—	10	3	—	—	13
N120E80	0-20	—	—	—	6	11	—	—	17
N120E90	0-20	—	3	1	4	23	—	—	31
N120E100	0-15	—	—	1	3	4	—	—	8
N120E110	0-15	2	1	—	7	10	—	1 (2.0)	21
N120E130	0-15	—	—	—	2	—	—	—	2
N130E65	0-20	—	—	—	—	1	—	—	1
N130E80	0-10	—	2	—	4	3	—	—	9
N130E100	0-15	1	2	4	18	12	—	—	37
N150E65	0-20	—	1	—	—	2	—	—	3
N150E80	0-10	—	—	—	1	1	—	—	2
N150E100	0-15	—	1	1	1	4	—	1 (1.0)	8
N170E80	0-15	—	—	—	1	—	—	—	1
N170E100	—	—	—	—	4	3	1 (1.0)	—	8
Surface	0	2	6	—	35	14	—	—	57
Total		8	37	19	175	154	2 (2.0)	2 (3.0)	397

Site 41DT175

This newly recorded prehistoric site (see Figure 8-50) is located on the northern slope of Lost Ridge, 500 m (1,640 ft) south of the Middle Sulphur River and 600 m (1,968 ft) west of the South Sulphur River. Site 41DT7 is plotted 40 m (131.2 ft) southeast of this site, but in actuality, both may represent a single site. Elevation of the site is 137 m (450 ft) above msl, and Annona silt loam is the mapped soil type. This area had recently been burned over, and surface visibility was excellent. In its native state, this area was a floodplain forest consisting of mixed hardwoods.

Stratigraphy

Three natural soil strata were identified at site 41DT175 and are described from oldest (lowest) to

youngest (uppermost). Stratum I is part of the remnant Pleistocene knoll forming Lost Ridge and consists of a mottled orange clay. It is horizontally continuous across the site and has been exposed by erosion in some areas (see Figure 8-50). This stratum is culturally sterile, although there is a low potential for penetration of prehistoric features into this subsoil.

Stratum II appears to be the remaining portion of an A or B soil horizon at the site. It is assumed to be discontinuous, as it was encountered in only two shovel probes (Shovel Test 2 and Shovel Test 3). This is a medium brown silty clay without mottling. The upper boundary of this stratum is diffuse and varies from 0-3 cm below ground surface. The lower boundary varies from 7-15 cm below ground surface.

Stratum III is a thin layer of medium brown silty clay which contains sod and organic matter.

It, too, is discontinuous across the site and was encountered in only two shovel probes (Shovel Test 1 and Shovel Test 4). Since it rests directly on Stratum I in these probes, Stratum III has formed since the landscape was eroded possibly due to historic land modification practices.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, placement of a permanent datum, shovel testing, and mapping. A scatter of flakes and fire-cracked rock was noted in pedestrian survey. Site size, determined by the surface scatter of artifacts, is ca. 4,400 m². The site does not continue southward to 41DT7, but the 40 m wide interspace may actually be due to historic bulldozing or land clearance. Artifacts recovered in non-controlled surface collection include four broken flakes, six utilized flakes, four tested cobbles, three early aborted bifaces, one thinned biface, one aborted late biface, one marginally modified biface, five cores, one dart point fragment (possibly a Palmillas type [Figure 8-90]), one dart point

midsection, and one piece of fire-cracked rock. All flaked stone materials are Ogallala quartzite.

The shovel testing program at site 41DT175 consisted of the excavation of four shovel probes ranging in size from 30 cm x 30 cm to 50 cm x 50 cm and extending 15-35 cm below ground surface. One unit (Shovel Test 2) was sterile. A single flake was recovered from each of the remaining shovel tests, all less than 5 cm below surface.

The site contained only prehistoric artifacts, but two historic sites lie nearby, including a concrete house foundation dating ca. 1950s-1960s. The prehistoric component of the site is interpreted as a Late Archaic period lithic reduction and camp site. The historic sites were occupied by tenants and were operated for an absentee landlord, Earl Luna.

Recommendations

Due to the presence of historic occupations on this non-aggrading land surface, the deposits are expected to be non-stratified at this site. Also, based on the collection of a Kent dart point from the ground surface, this land surface has been exposed for ca. 2,000-3,000 years, and intact



Figure 8-90. Flaked stone artifacts from site 41DT175, Delivery Order Number 7 study area (left right): biface (surface), Palmillas-like dart point fragment (surface), untyped projectile point fragment (surface).

deposits are not likely. Based on its questionable archaeological integrity, this site is judged to be definitely not eligible (Category III) for nomination to the National Register. Although the artifact assemblage at this site may provide culturally interpretable information, the lack of stratification or component separation detracts from the site's potential to address the subsistence, material culture, and chronological research questions outlined in the Research Design. If future information is found that warrants additional consideration, it will be reevaluated for NRHP eligibility. No further work is recommended.

Site 41DT176

This newly recorded prehistoric site (Figure 8-91) is located at the base of a southeast-facing terrace, 960 m (3,148.8 ft) south of the Middle Sulphur River. An old railroad line is located 720 m (2,361.6 ft) to the east. The flood levee is 75 m (246 ft) south of the site. Elevation of the site is 136.5 m (448 ft) above msl, and the mapped soil type is Annona loam. In its native state, this was a post oak savannah. The area has been cleared, intensively plowed, and is in fallow pasture today.

Stratigraphy

Two natural soil strata were identified from the shovel tests and soil descriptions for the Annona loam. Both are A soil horizons. Stratum I is a light yellowish brown (10YR4/2) loam with yellowish brown (10YR5/4) mottles. It has a clear wavy upper boundary at 10 cm below surface and was excavated to a maximum depth of 20 cm below ground surface. This stratum is continuous across the site, and is culturally sterile.

Stratum II is a dark grayish brown (10YR4/2) loam with yellowish brown (10YR5/4) mottles. Roots from the fallow field are common throughout. Although shovel tests did not recover any artifacts, the surface artifacts appear to be derived from this stratum.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, placement of a permanent datum, shovel testing, and mapping. The site consists of a 4 m x 30 m scatter of lithic artifacts. One whole flake, four broken

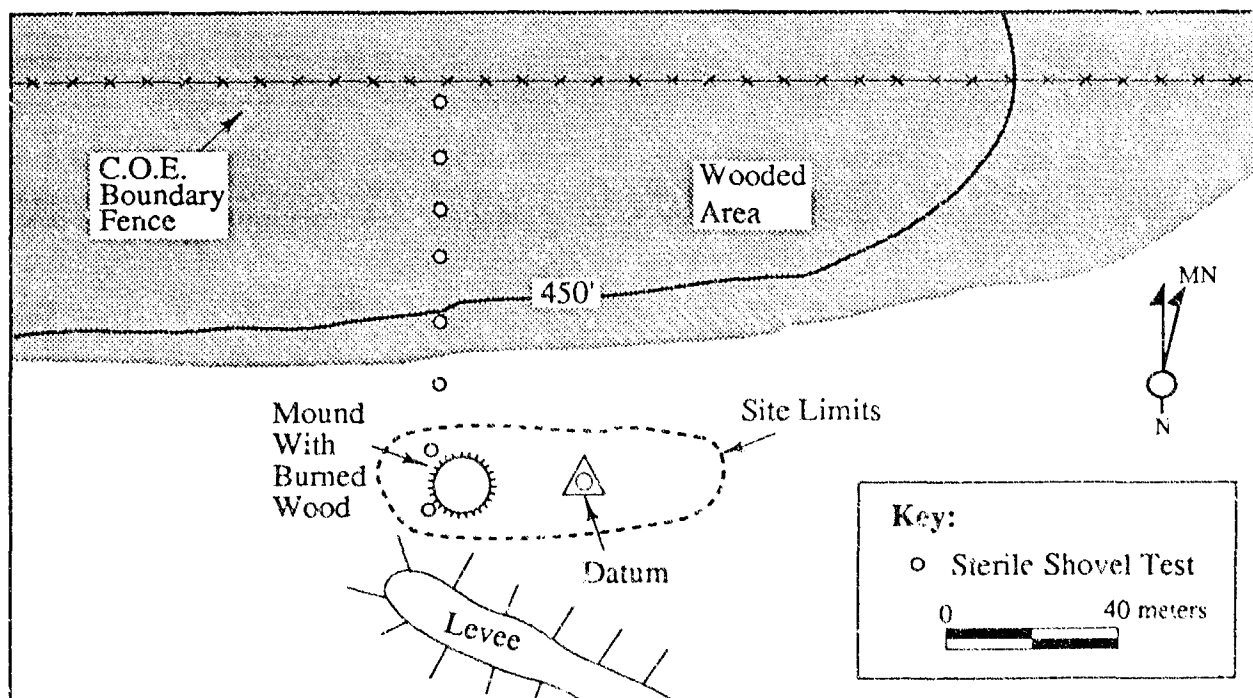


Figure 8-91. Plan of site 41DT176, showing locations of shovel tests, site limits as defined by surface artifacts, and surface features.

flakes, one early aborted biface, and one piece of fire-cracked rock were collected during the survey of a 120 m² area.

A transect of eight shovel tests spaced at 10-20 m intervals was excavated from the top of the ridge down to the site area, but no subsurface artifacts were recovered (see Figure 8-91). Shovel testing in the vicinity of a mounded area revealed a 15 cm thick, burned wood layer which is probably the remains of a modern campfire or brush pile from vegetation clearing. The layer of burned wood covered an area ca. 1 m x 1 m, and was excavated to a maximum depth of 15 cm below ground surface. A pile of barbed wire was also present.

Recommendations

The prehistoric period of occupation for this site is unknown, and the site is thought to have been a short-term lithic reduction activity locus. The small, undiagnostic artifact assemblage reduces the potential for answering chronological and material culture questions. The lack of faunal remains reduces the potential to address subsistence research questions. However, since the subsurface investigations were minimal, this site is classified as of unknown eligibility (Category II), and further evaluations may be necessary.

Site 41DT177

This newly recorded prehistoric and historic site (Figure 8-92) is located 140 m (459.2 ft) southeast of the old railroad grade and 700 m (2,296 ft) south of Jernigan Creek. Site elevation is 140 m (460 ft) above msl, and the mapped soil type is Woodtell loam. In its native state, this was a post oak savannah. It has been cleared and cultivated in the past, used as a historic farmstead, and is a fallow pasture today.

Draft reports on the Delivery Order Number 7 work initially assigned two unique site designations, 41DT177 and 41DT214, to the site's prehistoric and historic components, respectively. Because these components overlap, a single site designation has been assigned to this multicomponent locality.

Stratigraphy

Two natural strata were identified within the confines of the site locus. These are described below from the oldest (lowest) to youngest (uppermost).

Stratum I occurs in all shovel test probes and is assumed to be horizontally continuous across the study area. Vertically, its upper boundary varies from 7 cm (2.75 in) below ground surface to 40 cm (15.74 in) below ground surface. It was excavated to a maximum depth of 10 cm (3.93 in) below its upper boundary. Extensive erosion has exposed this stratum over ca. 30% of the mapped site area. The standing post oak trees have root systems that are exposed over 30 cm of their horizontal extent. Stratum I is a culturally sterile, very compact, sticky clay subsoil devoid of pebbles, gravel, or stone fragments and is lacking internal stratification. Its predominant color is yellowish brown (10YR5/4) with a yellowish brown (10YR5/6) mottle.

Stratum II is horizontally continuous across the probed portion of the site. Vertically, it occurs from ground surface to a minimum depth of 7 cm (2.75 in) below ground surface and extends to a maximum excavated depth of 40 cm (15.74 in) below ground surface. Stratum II is a very compact, sandy loam containing many organic and fallow field root systems in its upper limits. It exhibits no internal stratification and is devoid of pebbles, gravel, or small stone fragments. The dominant color is dark brown (10YR4/3). It is separated from underlying Stratum I by a clear smooth interface or boundary. Stratum II is a modern plow zone.

Archival Information

In 1914, a road was shown in the vicinity of site 41DT177, but no houses were indicated. Site 41DT177 is located on the D. Bills Survey (A-33). In 1936, this site was located on an 51.4 ha (127 acre) survey which was owned by Mrs. T. F. Hurt of Klondike. She obtained the property in 1910 for \$2,540 (Delta County Deed Book 19: 453). In 1936, the property had depreciated to \$1,875. At that time, 0.4 ha (1 acre) was reserved for the

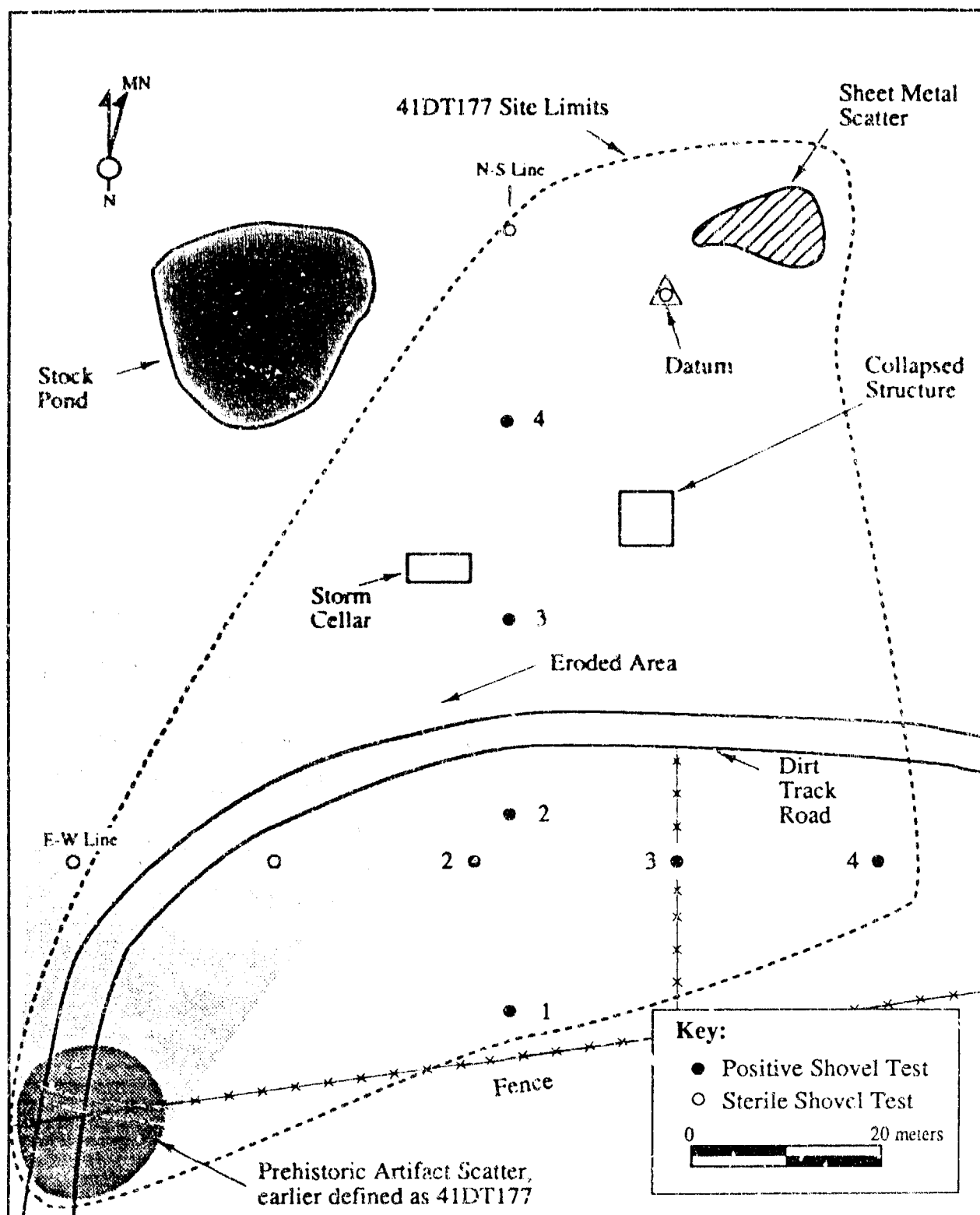


Figure 8-92. Plan of site 41DT177, showing locations of shovel tests, site limits (as defined by positive shovel tests and surface artifacts), and surface features.

house, 0.4 ha (1 acre) for the garden, 41.7 ha (103 acres) were in cultivation (14.2 ha [35 acres] in grain and 27.5 ha [68 acres] in cotton), 6 ha (15 acres) were in pasture, and 2 ha (5 acres) were wasteland. The farm was leased to tenants.

Two houses were indicated on this tract. Both were single-story, three-room structures, measuring 32 ft x 27 ft. Both houses were shown on the 1941 highway map and the 1964 USGS map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at the site included close interval (5 m) pedestrian survey and mapping. Two components were identified. The site's prehistoric component was visible at ground surface (see Figure 8-92) as a scatter of artifacts including six whole flakes, three broken flakes, one biface, four fire-cracked rocks, and one piece of shatter.

The site's historic component was visible at ground surface (see Figure 8-92) within an area of ca. 12,000 m² (3 acres). Architectural remains in this area included a collapsed, partially burned structure; a storm cellar; and a scatter of sheet metal. Only recent refuse was noted on the ground surface, and included materials such as "standard" bricks, barbed wire, tar paper, asphalt shingles, a gas stove, and bottles. A single clear bottle glass fragment was collected.

Site 41DT177 was revisited in March 1991. A series of shovel probes was excavated from the eroded margin of 41DT177, eastward through the historic farmstead component (see Figure 8-92). Thirteen Historic and 91 Prehistoric period artifacts were recovered from within Stratum II at that time. The Prehistoric period artifacts included lithic debitage, fire-cracked rock (not tabulated), and the distal portion of a projectile point. The Historic period artifacts from the probes include small metal fragments, glass fragments, and modern plastics. The distribution of the prehistoric lithic assemblage from the March 1991 investigations is shown in Table 8-17.

Recommendations

The additional shovel testing undertaken at site 41DT177 defined two natural strata. Aboriginal cultural resources recovered from the site locus during our investigations most likely represent episodic Native American manufacture and/or refurbishing of stone tools. Their cultural attribution and temporal provenance are unknown. The prehistoric landform and stratigraphy is only partially preserved along the original fence lines, while the remainder of the ground surface within the study area is heavily eroded, compacted, degraded, and modified by historic and modern agricultural activities.

No significant Historic period artifacts or features were observed during our subsurface testing, but the presence of small metal, glass, plastic, and ceramic fragments indicates a mixed and disturbed depositional context. The historic component, which represents occupations dating from ca. 1936 to the 1970s, has low potential to yield important information on historic settlement, technology, material culture, or subsistence.

In summary, based upon the negative results of the pedestrian reconnaissance, subsurface testing, and the absence of both prehistoric cultural features and significant Historic period cultural resources, we conclude that no potentially significant cultural resources are preserved within the defined boundaries of site 41DT177. The site is classified as Category III, and accordingly, no further cultural resource management efforts are recommended.

Site 41DT178

This newly recorded prehistoric site (Figure 8-93) is located in a slope/upland setting on the eastern edge of a south-facing ridge, 490 m (1,607.2 ft) west of Johns Creek. An unnamed tributary stream is located 100 m (328 ft) to the west. Elevation at the site is 137 m (450 ft) above msl. The mapped soil type is Annona loam. In its native state, this area was a post oak savannah.

TABLE 8-17

Distribution of Flaked Stone Artifacts from 41DT177, Delivery Order Number 7 Study Area,
by Excavation Unit, Arbitrary Level, Raw Material Type, and Artifact Technotype

Excavation Unit	Stratum	Level	Cores and Core Fragments	Primary Core Trimming Flakes	Secondary Core Trimming Flakes	Tertiary Core Trimming Flakes	Bifaces and Biface Fragments	Primary Biface Thinning Flakes	Secondary Biface Thinning Flakes	Tertiary Biface Thinning Flakes	Projectile Points/Point Fragments	Specialized Implements	Non-Diagnostic Shatter	Total
N-S LINE														
Probe 1	II	0-10 cm	--	--	--	--	--	3	--	1	--	--	4	8
Probe 2	II	0-10 cm	--	--	--	--	--	1	--	--	--	--	--	1
Probe 3	II	0-10 cm	--	--	--	--	--	1	--	--	--	--	1	2
Probe 4	II	0-10 cm	--	--	--	--	--	--	--	1	--	--	--	1
E-W LINE														
Probe 2	II	0-10 cm	--	--	--	--	1 ^a	1	--	--	--	--	1	3
Probe 3	II	0-10 cm	--	1	1	--	--	2	1	--	--	--	--	5
Probe 4	II	0-10 cm	--	--	--	--	1 ^b	7	4	--	--	--	1	13
	II	10-20 cm	1 ^c	4	1	--	--	5	6	1	--	1 ^d	3	22
	II	20-30 cm	--	2	--	--	--	1	1	2	1 ^e	--	9	16
	II	30-40 cm	--	7	--	--	--	2	--	6	--	--	5	20
SUBTOTAL: RAW MATERIALS														
Fine-grained ^f		N	1	7	1	--	2	22	11	10	--	1	9	64
Ogallala Quartzite		%	1.6	10.9	1.6	--	3.1	34.4	17.2	15.6	--	1.6	14.1	100.0
Medium-grained ^f		N	--	7	1	--	--	1	1	1	1	--	15	27
Ogallala Quartzite		%	--	25.9	3.7	--	--	3.7	3.7	3.7	3.7	--	55.6	100.0
TOTAL			1	14	2	--	2	23	12	11	1	1	24	91
PERCENT OF TOTAL			1.1	15.4	2.2	--	2.2	25.3	13.2	12.1	1.1	1.1	26.3	100.0

a tertiary-thinned biface fragment

b tertiary-thinned biface fragment

c multidirectional opportunistic core

d unifacially modified secondary core trimming flake

e untyped projectile Point fragment

f see discussion of raw material for 41HP159

NOTE: Two formed tools show utilization.

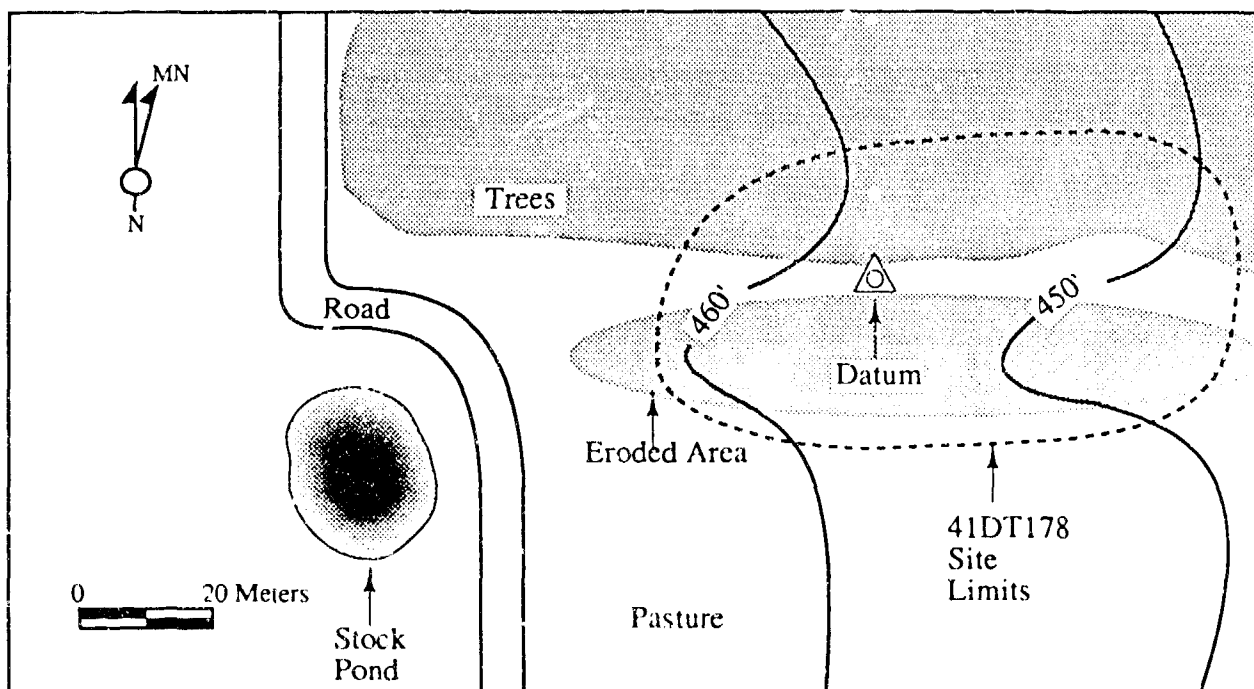


Figure 8-93. Plan of site 41DT178, showing the locations of site limits (as defined by surface artifacts), site datum, and land disturbances.

Stratigraphy

Three natural soil strata were identified in BHT 199, which was excavated ca. 200 m south of site 41DT178 on the same upland/slope interface at the same elevation. These three strata are described in order from oldest (lowest) to youngest (uppermost).

Stratum I is a dark gray (10YR4/1) clay with light yellowish brown (2.5Y6/4) mottles. It has an abrupt wavy boundary at 63 cm below surface and was excavated to a maximum depth of 90 cm below surface. It is assumed to be continuous across this upland landform, including the location of BHT 199 and the 41DT178 site locus. It is culturally sterile. Stratum I is exposed by erosion in 10% of the site area.

Stratum II is a pale brown (10YR6/3) loam. It has a gradual boundary at 20 cm below ground surface. This stratum is exposed by erosion over ca. 40% of the site area. It is culturally sterile.

Stratum III is a dark grayish brown (10YR4/2) loam which is the surface (Ap) soil horizon. It has been removed by erosion from

over 50% of the site area and is discontinuous across the entire upland/slope landform from BHT 199 to site 41DT178. All cultural materials are derived from this stratum.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and mapping. The site consists of scattered flakes lying in erosional gullies over a 2,400 m² area (see Figure 8-93). Due to the eroded nature of the site and pasture in which it lies, there are no clear site boundaries and very low site integrity. Additional flakes were noted in a gully, but appear to have been washed down from the ridge above.

A total of 15 whole flakes, 15 broken flakes, two utilized flakes, three cores, and eight pieces of shatter were collected. Erosion has occurred site, and artifacts have been redeposited downslope. Original site size is thought to have been smaller. The site is classified as a lithic reduction site of unknown prehistoric age.

Recommendations

Due to extensive erosion, the integrity of the site is poor. The site is considered clearly not eligible (Category III) for nomination to the National Register. The small artifact assemblage does not allow evaluation of the site's potential to address the material culture, chronological, and subsistence questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT179

This newly recorded prehistoric site (Figure 8-94) is located in a slope setting on a terrace east of Johns Creek. It is 340 m (1,115.2 ft) east of Johns Creek and 400 m (1,312 ft) southeast of

FM 1528. A gravel road is present on the east side of the site. Elevation at the site varies from 137 m (450 ft) and 139 m (455 ft) above msl, and the mapped soil type is Wilson silt loam. In its native state, this was an upland prairie with a post oak savannah downslope. This area has been intensively cultivated in the past and has been heavily eroded.

Stratigraphy

Two natural strata were identified at site 41DT179. These are described in order from oldest (lowest) to youngest (uppermost). Stratum I is a very dark gray (10YR3/1) clay loam. It has an abrupt smooth upper boundary at 15 cm below ground surface and was excavated to 25 cm below surface. It is continuous across the site locus.

Stratum II is the surface (Ap) horizon at site 41DT179. It is a very dark gray (10YR3/1) silt

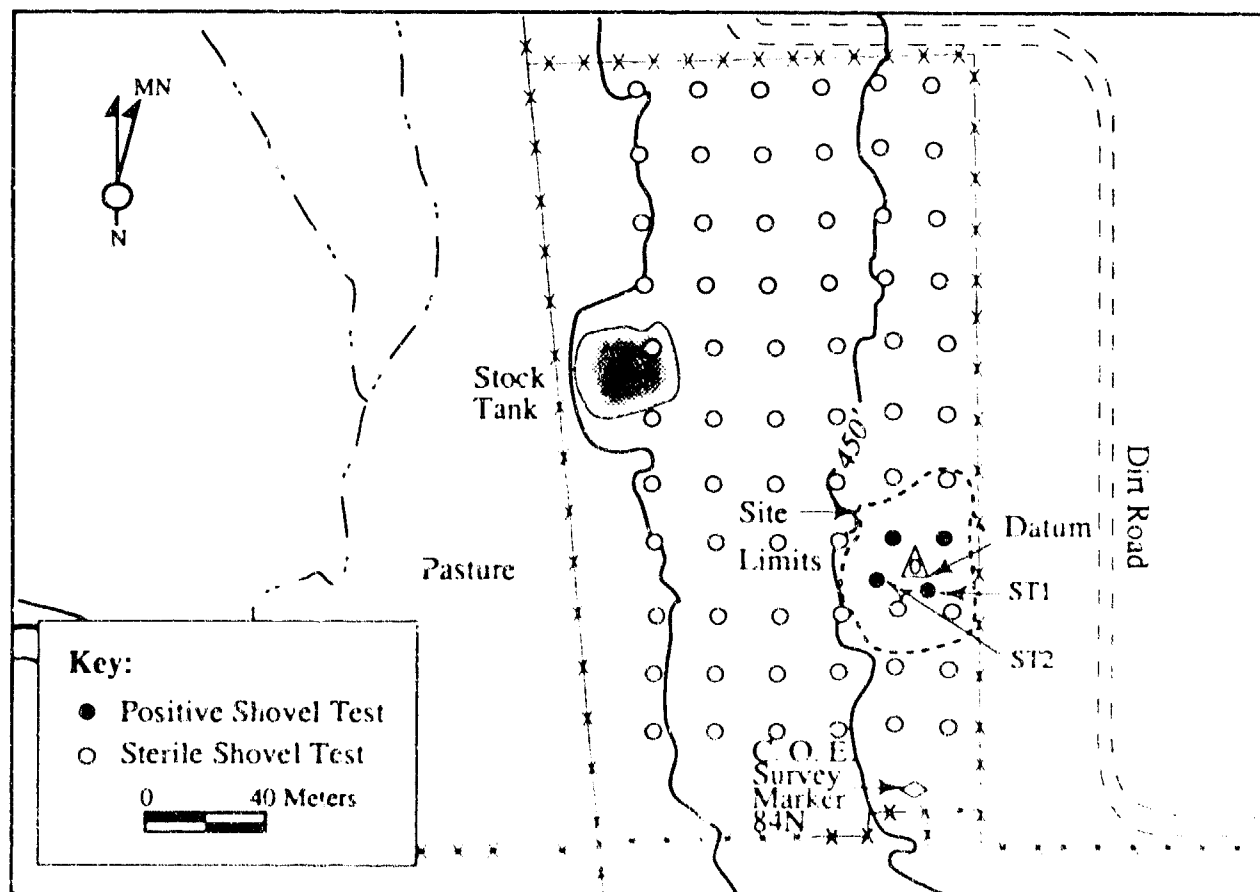


Figure 8-94. Plan of site 41DT179, showing locations of shovel tests, site limits (as defined by surface artifacts and positive shovel tests), and land modifications

loam, with few roots due to intensive cultivation in the past. This stratum is continuous across the defined site area.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, shovel testing, and mapping. The landform on which 41DT179 is located was systematically probed as a part of the geoarchaeological exploration of the slope/upland topographic zone. It was thought that this zone had a high potential for the preservation of small prehistoric sites with relatively short-term occupations.

Flakes and fire-cracked rock were surface collected from a 1,200 m² area (see Figure 3-94). The pasture was intensively shovel tested with 68 shovel tests spaced at 20 m intervals. Only two units within the scatter (Transect 1 Shovel Test 8, Transect 2 Shovel Test 8) produced low-density prehistoric artifacts in the upper 25 cm of the site deposits. Two additional close-interval shovel tests (labelled ST 1 and ST 2 in Figure 8-94) excavated in the scatter were sterile. Prehistoric artifacts collected include one whole flake and one broken flake.

Three historic refined earthenware ceramic fragments were collected from the ground surface at 41DT179. One of these is a blue shell-edged rim sherd with deep tridents. One light blue and one cranberry transfer printed ceramic were also recovered. These items date from the 1850s to the 1880s. Since these were the only historic items noted or collected at the site or in the excavations, they appear to be isolated finds.

Recommendations

This low-density undifferentiated prehistoric site has been disturbed by plowing. The age of occupation and site function are unknown. It is considered clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT180

This church and cemetery site (Figure 8-95) is located 2 km (1.2 mi) southeast of Klondike at a 90° turn in the modern gravel road that leads into the reservoir from Klondike. It lies on the eastern end of a low rise at an elevation of 134 m (440 ft) above msl. The mapped soil type at the site is Crockett loam. Honey Creek flows 140 m (459.2 ft) to the north. The South Sulphur River is 1,600 m (5,248 ft) south of the site. In its native state, this was a post oak savannah adjacent to a floodplain forest.

Stratigraphy

Since this locality is a historic cemetery and church complex, subsurface investigations were limited to an examination of grave shafts. The Crockett loam is characterized by four major strata. Stratum I is the C soil horizon, which consists of light gray (2.5Y7/2) and brownish yellow (10YR6/6) loam. It has a clear, wavy upper boundary at 1.5 m below surface and was excavated to a maximum depth of 1.83 m below ground surface.

Archival Information

Site 41DT180 is located on a tract of land which belonged to Warren and Flora Blandon (see Chapter 7). Flora was reportedly a Native American and Warren was a freedman; both were born in 1813. Warren died in 1880 and Flora in 1893. They and other African American families such as the Jones, Crawfords, Kellys, and Carters immigrated from Mississippi after the Civil War and formed the nucleus for the Friendship Community (see Chapter 7). Warren Blandon donated the land for the Friendship Cemetery, Methodist Church, and school, all defined as site 41DT180. Although the cemetery and church date to the nineteenth century, the school started ca. 1900.

The site measures 60 m x 100 m, with both historic and prehistoric components (see Figure 8-95). The church which was located at the site was known as the Old Friendship Church. It was a late nineteenth and early twentieth century

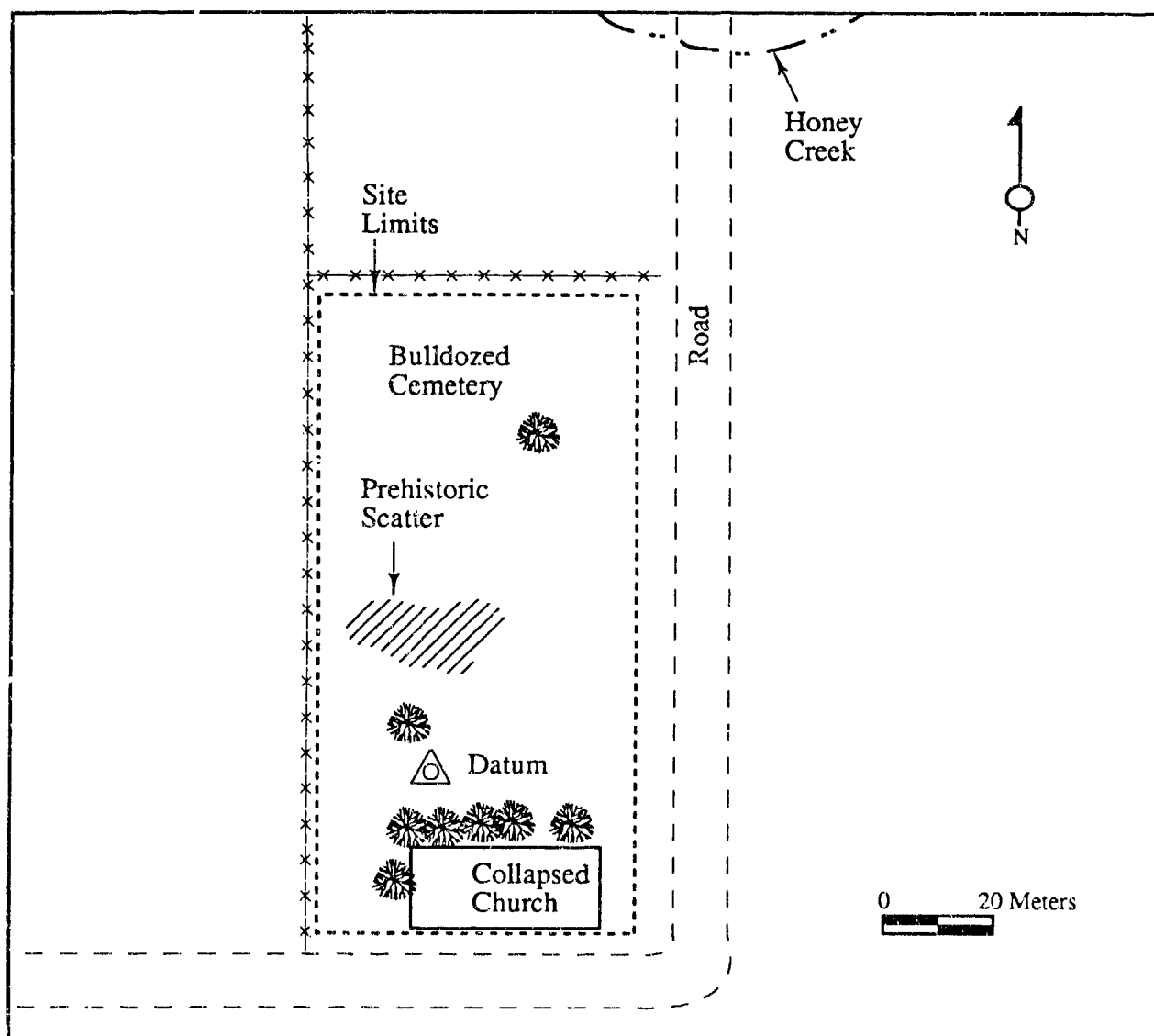


Figure 8-95. Plan of site 41DT180, showing site limits and location of prehistoric artifact scatter.

Methodist church and cemetery, associated with African American inhabitants of the Friendship settlement. The church was a wooden frame structure, and now is in total ruin. Its location is also shown on the 1914 Levee Improvement District Map and 1941 highway maps of the area. Presumably it was still standing in 1964, and is shown on the USGS Cooper South 1964 7.5' Quadrangle map. A cistern lined with machine-made brick was also noted at the site during pedestrian survey.

The cemetery was located behind the church, to the north. It was relocated by the Burial Relocation Division of the CE in the fall of 1989.

After removal of known graves, substantial mechanized subsurface searching was performed by the CE in the cemetery. A total of 225 graves and 13 possible graves were listed by the CE. Only 63 of the 225 identified grave sites were marked. This information on individuals buried at the Friendship Cemetery is listed in Table 8-18. A map of the cemetery was compiled by the CE with a number assigned to each identified or possible grave. Additional names for individuals buried at the cemetery were provided by Mrs. Christine Ray, a local historian. Mrs. Ray located the information in county cemetery records housed at the Delta County Public Library (Table 8-19).

TABLE 8-18

Friendship Cemetery (Site 41DT180) Burial Information Recorded from Headstones
by the Corps of Engineers Burial Relocation Office

Grave Number	Name	Date of Birth	Date of Death	Headstone
1	Hero Douglas English	8 Apr 1900	13 Dec 1930	gray granite
2	Gladys Jefferies	1922	1930	gray granite
3	Unknown	—	—	metal
4-7	Unmarked	—	—	—
8	F. R. Barker	DE 1866		old concrete
9	Leonard Barker	25 Nov 1895	4 Mar 1969	gray granite
10-12	Unmarked	—	—	—
13	Nnie Norris	—	—	old metal tag
14-19	Unmarked	—	—	—
20	Walter L. English	11 Sept 1889	19 July 1962	red granite
21	Charlie English	27 Jan 1905	17 Jul 1917	gray granite
22	Unmarked	—	—	—
23	Father Sampy English	1865	1936	soft granite
24	Mother Roxie English	1865	1943	soft granite
25	Pearl English Lee	14 Dec 1891	20 Mar 1925	gray granite
26	Addie English Crisp	1886	1928	gray granite
27-30	Unmarked	—	—	—
31	John Lewis Carter	8 Feb 1887	2 Aug 1981	gray granite
32	Unmarked	—	—	—
33	Wallace D. Carter	1889	19-	gray granite
34	Mae Lou Carter	1896	1961	gray granite
35-39	Unmarked	—	—	—
40	James Brooks	28 Dec 1835	—	—
41	Jennie Brooks	13 Aug 1855	—	—
42	Hal Blake	22 Jan 1904	—	—
43-48	Unmarked	—	—	—
49	Flora E. Reed	15 Nov 1899	5 Mar 1976	gray granite
50-52	Unmarked	—	—	—
53	Unknown	—	—	old metal tag
54	Phebe Kelly	9 Jun 1861	22 Mar 1925	soft granite
55-56	Unmarked	—	—	—
57	Maggie Brownrigg	29 Apr 1881	15 Oct 1963	gray granite
58-59	Unmarked	—	—	—
60	Louis Crawford	11 Sep 1893	19 July 1959	gray granite
61-63	Unmarked	—	—	—
64	Unknown	—	—	—
65	Maggie Crawford	16 Oct 1895	1 May 1896	concrete base
66-69	Unmarked	—	—	—
70-72	Unknown	—	—	—
73-82	Unmarked	—	—	—
83	Susan Jones	1844	26 May 1891	marble
84	Lizzie Jones	25 Feb 1857	20 Feb 1891	marble
85-91	Unmarked	—	—	—
92	Warren Blandon	4 Jul 1863	1 Sep 1942	gray granite

TABLE 8-18 (cont.)

Grave Number	Name	Date of Birth	Date of Death	Headstone
93	Unmarked	—	—	—
94	Rosie Blandon	Mar 1863	3 Mar 1907	sandstone base
95	Sam Wesley Geary	1905	1970	red granite
96-97	Unmarked	—	—	—
98	Matilda Geary	17 Jan 1873	30 Mar 1929	gray granite
99	Unknown	—	—	sandstone
100	G. W. Geary	15 Oct 1858	18 Mar 1950	gray granite
101	Eliza Blandon	1 Feb 1857	9 Dec 1953	gray granite
102	Unmarked	—	—	—
103	Lonie Gipson	6 Jan 1887	25 Dec 1926	gray granite
104	Unmarked	—	—	—
105	Addie Greer	26 Aug 1894	10 Sep 1930	gray granite
106	Lessie Blandon	8 Aug 1887	22 Aug 1916	gray granite
107	N. B. Blandon	16 Apr 1865	31 Oct 1925	gray granite
108	Unknown	—	—	—
109	James Blandon	14 Jan 1873	24 Nov 1885	marble
110	Flora Blandon	Aged 80	27 Dec 1893	sandstone base
111	Warren Blandon	Aged 67	19 Feb 1880	marble
112	Infant	20 Mar 1886	Aged 10 days	marble
113-114	Unmarked	—	—	—
115	James English	1887	1907	gray granite
116	Unknown	—	—	old metal tag
117-123	Unmarked	—	—	—
124	Unknown	5 Sep 1902	25 Nov 1908	sandstone
125-138	Unmarked	—	—	—
139	Charley H. Jones	14 July 1877	7 Jul 1937	gray granite
140	Margaret McGracie Jones	25 Dec 1883	7 Feb 1946	gray granite
141-158	Unmarked	—	—	—
159	Allie Davenport	7 Apr 1892	16 Feb 1943	gray granite
160	Rufus Blandon	17 Jun 1902	9 Dec 1953	gray granite
161	Cora Blandon	19 Oct 1875	2 Feb 1960	gray granite
162-169	Unmarked	—	—	—
170	Maurine Rutherford	1905	1971	new metal tag
171-175	Unmarked	—	—	—
176	Unknown	—	—	metal tag
177-180	Unmarked	—	—	—
181	Jane Anderson	1 Nov 1831	29 Dec 1915	marble
182	C. W. Anderson	5 Apr 1830	15 Oct 189-	marble
183	Martha Bowens	—	—	marble
184	Unknown	—	—	—
185-186	Unmarked	—	—	—
187	Mrs. Louella Booker	25 Jan 1903	5 Oct 1984	new metal tag
188	Clifford Booker	29 Nov 1905	19 Dec 1972	gray granite
189	Will Booker	1881	1953	metal tag
190	Mary Booker	1876	1948	hard limestone
191-193	Unmarked	—	—	—
194	W. A. Sheppard	14 Feb 1890	23 Nov 1890	sandstone

TABLE 8-18 (cont.)

Grave Number	Name	Date of Birth	Date of Death	Headstone
195-199	Unmarked	—	—	—
200	Unknown	—	—	old metal tag
201-204	Unmarked	—	—	—
205	Hart Andrews	—	1965	gray granite
206	Beulah L. Andrews	1890	1974	gray granite
207	Shannon Anderson	11 May 1911	24 Sep 1976	white marble
208-219	Unmarked	—	—	—
220	William R. Crawford	4 Apr 1889	15 Jul 1965	gray granite
221	Nellie D. Crawford	16 Feb 1895	—	gray granite
222	Lee G. Crawford	4 Dec 1893	1 Jul 1970	white marble
223-236	Unmarked	—	—	—
237	James Anderson	—	—	—
238	Willie Anderson	—	—	—

TABLE 8-19

Additional Information on the Friendship Cemetery (Site 41DT180)
 Provided by Informant Christine Ray, Klondike

Name	Date of Birth	Date of Death
G. W. Anderson	5 Apr 1830	15 ? 1891
Jane Anderson	1 Nov 1831	29 Dec 1915
Rosie B. L. Anderson	Mar 1863	3 Mar 1907
Shanon Anderson	11 May 1911	24 Sep 1976
Beulah L. Andrews	1890	1974
Hart Andrews	—	1963
Leonard C. Baker	25 Nov 1895	14 Mar 1969
Cora Blandon	19 Oct 1875	2 Feb 1960
Eliza Blandon	2 Jan 1867	9 Dec 1953
Flora Blandon	—	27 Dec 1893
James Blandon	11 Nov 1873	24 Nov 1886
Lessie Blandon	8 Aug 1897	22 Aug 1916
N. B. Blandon	16 Apr 1865	31 Oct 1925
Rufus Blandon	17 Jun 1902	9 Feb 1960
Warren Blandon	4 Jul 1863	1 Sep 1942
Clifford N. Booker	29 Nov 1905	19 Dec 1976
Mary Booker	1876	1948
Bowens Maggie Browning	29 Apr 1881	15 Oct 1963
Mae Lou Carter	1896	1961
Wallace Carter	1889	19??
Lee G. Crawford	4 Dec 1893	1 Jul 1970
Louis Crawford	11 Sep 1893	19 Jul 1959

TABLE 8-19 (cont.)

Name	Date of Birth	Date of Death
Maggie Crawford	16 Dec 1895	1 May 1896
Nellie D. Crawford	16 Feb 1895	1970
Sally Carter Crawford	—	1903
W. R. Crawford	4 Apr 1889	15 Jul 1965
Addie English Crisp	1886	1928
Alice Davenport	7 Apr 1892	—
Charles English	27 Jan 1905	17 Jul 1917
Hero Douglas English	8 Apr 1900	13 Dec 1939
Roxy Blandon English	1865	1943
Sampy English	1865	1936
Walter English	11 Sep 1889	19 Jul 1962
G. W. Geary	15 Oct 1858	18 Mar 1915
Matilda Geary	17 Jan 1873	30 Mar 1929
Sam Wesley Geary	1905	1970
Lonie Gipson	6 Jan 37	25 Dec 1926
Gladys Jefferies	192.	1950
Charley Jones	14 Jul 1877	7 Jul 1937
Margaret McGradie Jones	25 Dec 1883	7 Feb 1946
Susan Jones	1844	26 May 1891
Infant	20 Mar 1886	—
Phebeb Kelly	9 Jun 1861	22 Mar 1925
Pearl English Lee	14 Dec 1891	20 Mar 1925
Maurie Rutherford	1905	1971
W. A. Sheppard	14 Feb 1890	23 Nov 1892
Flora Wright	5 Aug 1896	21 Apr 1976

The listings shown in Tables 8-18 and 8-19 were useful for comparison with informants' reports about former residents of the Friendship Community (see Chapter 7).

Archaeological Investigations

During pedestrian survey, the disturbed cemetery area was inspected. Prehistoric artifacts were collected in a 200 m² area within the disturbed cemetery (see Figure 8-95). Artifacts collected include 10 whole flakes, six broken flakes, two utilized flakes, one piece of shatter, shell, and fire-cracked rock. Mechanized search in the cemetery area has disturbed the prehistoric site. No temporally diagnostic artifacts were found. The prehistoric component is classified as of unknown age, and is thought to have been a lithic reduction or temporary camp site.

Historic artifacts were collected from surface contexts around the collapsed church. The artifact assemblage consists of 13 items: three refined earthenwares, two stonewares, five bottle glass sherds, and three cut nails. The two ironstone whiteware fragments date ca. 1840-1910. A single floral decalcomania whiteware fragment dates 1895-1950. The cut nails suggest that the church was built prior to 1900, or that earlier buildings were once present. A single small manganese solarized medicine bottle dates ca. 1880-1920, and a continuous-thread cold cream jar dates from 1910 to the present.

Recommendations

Although church and cemetery sites are not well documented in the reservoir, Friendship Church and Cemetery has been extensively

documented by informant interviews. The CE Burial Relocation Office has produced a detailed report of the burials. Burial relocation has disturbed the prehistoric component of the site. The historical value of this site is considerable in relationship to the ethnic and settlement research questions outlined in the Research Design. It is classified as Category II, and further investigations, primarily of a historical nature, are recommended. Such investigations could include the erection of a historical marker at the new Friendship Cemetery.

Site 41DT181

This newly recorded prehistoric and historic site (Figure 8-96) is located 200 m (656 ft) east of Johns Creek and 1 km (0.6 mi) southeast of FM 1528. Elevation at the site varies between 131-134 m (430-440 ft) above msl. The mapped soil types are Wilson silt loam and Kaufman clay. Construction of a stock pond at the southern end of the site has exposed prehistoric artifacts. In its native state, this site was located in a slope forest or post oak savannah, adjacent to an upland

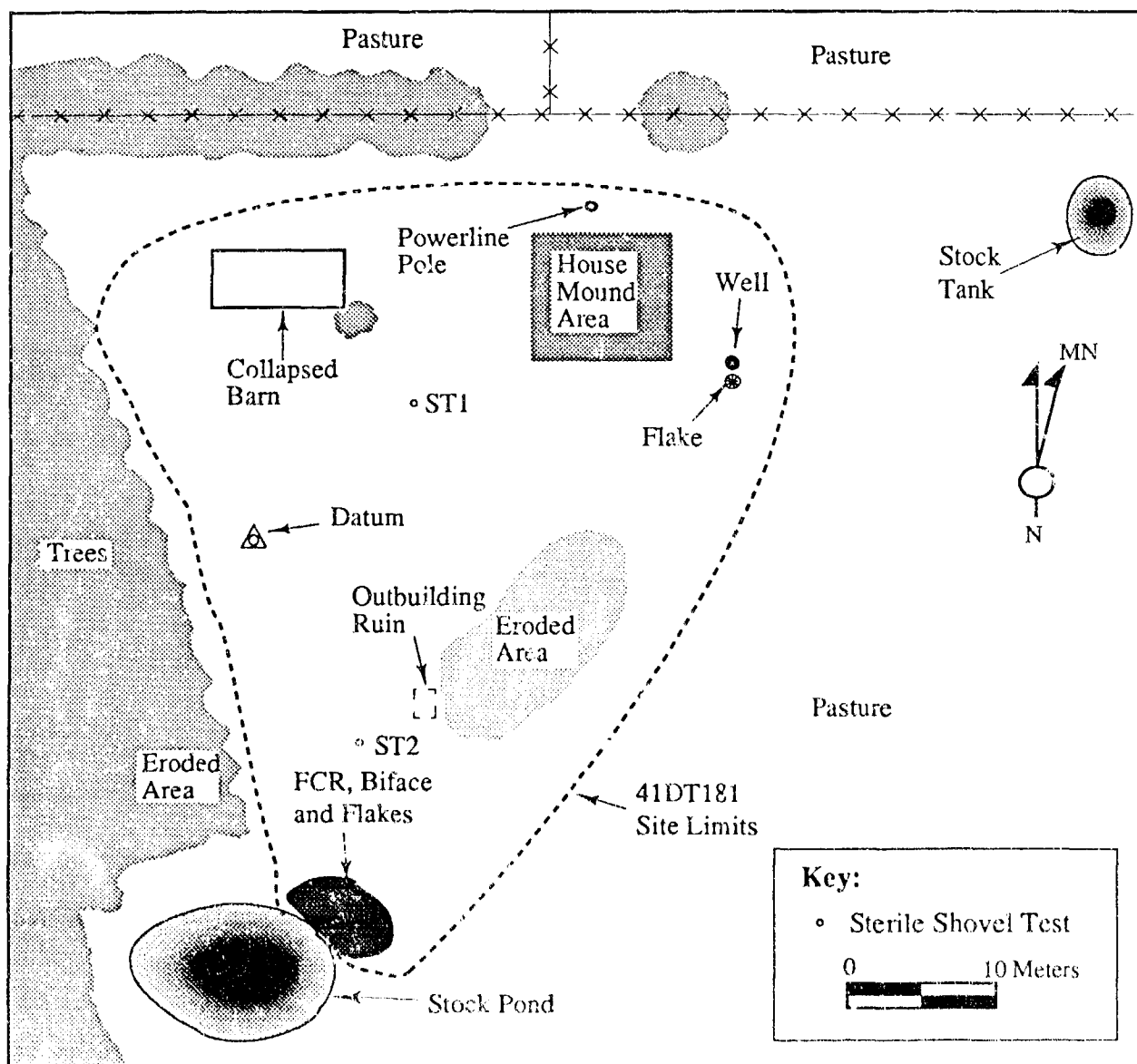


Figure 8-96. Plan of site 41DT181, showing locations of surface artifacts, shovel test, surface features, and land disturbances.

prairie to the north and east, and a floodplain forest dominated by mixed hardwoods to the west along Johns Creek.

Stratigraphy

The two natural soil strata identified within site 41DT181 are described from older (lower) to younger (upper). Stratum I was horizontally continuous across the site and occurred in all shovel probes. This stratum was exposed by erosion and farm-related excavation over approximately 10% of the defined site area. Stratum I is a medium brown mottled clay. Its upper boundary occurs at 20 cm below surface, and it was excavated 30-40 cm below surface. This stratum is culturally sterile.

Stratum II is also horizontally continuous across the site, except where disturbed by the construction of a house, barn, and corral, and where a well and stock tank have been excavated. This stratum is a dark brown silty clay which has been enriched by organic matter. This stratum varies 0-20 cm in thickness.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, shovel testing, surface collections, and mapping. The historic component at 41DT181 appeared to be less than 50 years old, based on aboveground features as well as surface material culture items.

The site was revisited in March 1991 for further subsurface investigations. The shovel testing program was limited to the excavation of two 50 cm x 50 cm units. Shovel Test 1 was excavated to 30 cm below ground surface. Shovel Test 2 was excavated to 40 cm below surface. No prehistoric artifacts were recovered from either unit. Shovel Test 1, located between the house site and collapsed barn, yielded a single tin can fragment 0-20 cm below surface. Shovel Test 2, located between the stock tank and the barn, yielded one fragment of glass, and one fragment of machine-made brick 0-5 cm below surface.

A collapsed wood and sheet metal barn is located 40 m north of the stock pond. Recent historic refuse is scattered on the site and is not

thought to represent occupational debris. From the disturbed stock pond berm and eroded area (see Figure 8-96), four whole flakes, six broken flakes, two utilized flakes, one late aborted biface, one tested cobble, and nine fire-cracked rocks were collected.

The age of the prehistoric component is unknown since no temporally diagnostic artifacts were recovered. Lithic reduction is thought to have been the major prehistoric activity. The historic component at the site is related to late twentieth century cattle ranching, based upon the dates of the artifacts (wire nails) used in the construction of the standing outbuilding. The well, associated with the house site, was made from machine-made brick dating to the twentieth century.

Recommendations

Stock pond construction has extensively disturbed the prehistoric component at the site. The site is considered clearly not eligible (Category III) for nomination to the National Register. The prehistoric artifact assemblage recovered to date is too limited to address any material culture or subsistence-related research questions. The lack of substantial prehistoric deposits and the extremely high cost anticipated in recovering a meaningful artifact assemblage detract from the research potential of this site. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT182

This newly recorded prehistoric site (Figure 8-97) is located in a slope setting on the crest of a southeast-facing terrace 190 m (623.2 ft) north of Honey Creek and 190 m (623.2 ft) south of the Free Hope Church Road. Prehistoric site 41DT19 is located 150 m (492 ft) to the southeast and site 41DT29 is located 150 m (492 ft) west of the site. Elevation at the site is 134 m (440 ft) above msl. The mapped soil type is Crockett loam. In its native state, this area consisted of a post oak savannah on a slope landform, with upland prairie to the north and floodplain forest to the south.

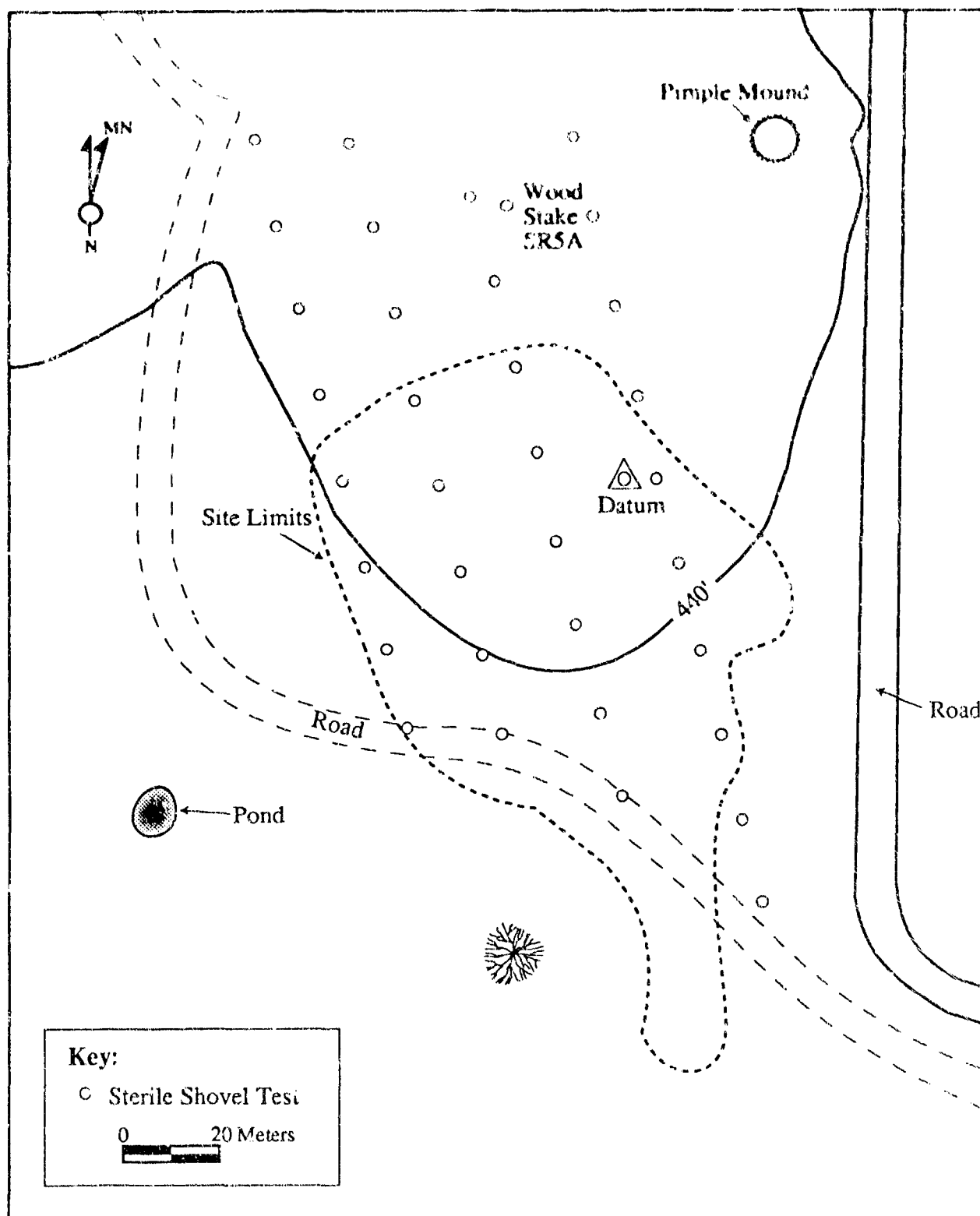


Figure 8-97. Plan of site 41DT182, showing locations of shovel tests, site limits (as defined by surface artifacts), surface features, and land disturbances.

Stratigraphy

Two natural soil strata were identified at site 41DT182. These are discussed in order from older (lower) to younger (upper). Stratum I is a brown (10YR4/3) clay which is horizontally continuous across the site locus. It has a diffuse wavy boundary 0-17 cm below surface and was excavated to a maximum depth of 30 cm below ground surface. It is culturally sterile. Stratum I has been exposed over 50% of the defined site boundaries by erosion, vehicular traffic, and historic agricultural activities.

Stratum II is a very dark grayish brown (10YR3/2) loam. This surface soil horizon has been intensively plowed in the recent past. All cultural materials are assumed to be derived from this stratum.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, surface collections, shovel testing, and mapping (see Figure 8-97). Site testing was accomplished by excavating 35 shovel tests, all of which were sterile. A surface collection of artifacts was made from eroded areas of the slope. A total of 14 whole flakes, 22 broken flakes, four utilized flakes, one core fragment, one tested cobble, four pieces of shatter, one late aborted biface, and fire-cracked rock were collected from the site in a 7,200 m² area. Artifacts collected are thought to be redeposited from the top of the slope, since no artifacts were found in the shovel probes of this area.

The historic artifact assemblage collected from the ground surface at 41DT182 consists of seven items: three refined earthenwares, three bottle glass sherds, and one fragment of an automobile headlight. The three pure white whitewares date ca. 1890 to the present. A single fragment of manganese solarized glass dates ca. 1880-1920. These artifacts may be associated with site 41DT191, a historic site located 100 m to the north, or they may indicate a light occupation or use of the site area. The modern debris was likely the result of a historic trash disposal area related to site 41DT191.

Recommendations

This site is classified as of unknown prehistoric age, with twentieth century historic use or occupation. Lithic reduction is thought to have been a major prehistoric activity at the site. The negative results from shovel testing indicate that there is little potential for intact subsurface features at the site. Based on the results of testing and surface collections, the site is considered as clearly not eligible (Category III) for nomination to the National Register. The prehistoric artifact assemblage lacks temporally or culturally diagnostic items. Subsistence-related remains are absent. It is judged to have low potential to address either prehistoric or historic material culture and settlement questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT183

This historic site (Figure 8-98) is located on the northern slope of a ridge lying between the Middle and South Sulphur rivers. The Middle Sulphur River lies 370 m (1,213.6 ft) north of the site. Elevation at the site is 140 m (460 ft) above msl. The mapped soil type is Annona loam. In its native state, this area consisted of a slope forest with mixed hardwoods adjacent to a floodplain forest.

Stratigraphy

The Annona loam is characterized by two soil horizons over deep, well-developed B soil horizons. The three surface strata present in this area are discussed in order from the oldest (lowest) to youngest (uppermost). Stratum I is a B2lt which is a dark red (2.5YR3/6) clay. It has a gradual, wavy upper boundary at 23 cm below surface and extends to 40 cm below ground surface. At site 41DT183, Stratum I is culturally sterile. It was exposed in an eroded area around a cistern and a stock tank excavation 30 m south of the site.

Stratum II is a light yellowish brown (10YR6/4) loam. It has a clear wavy upper

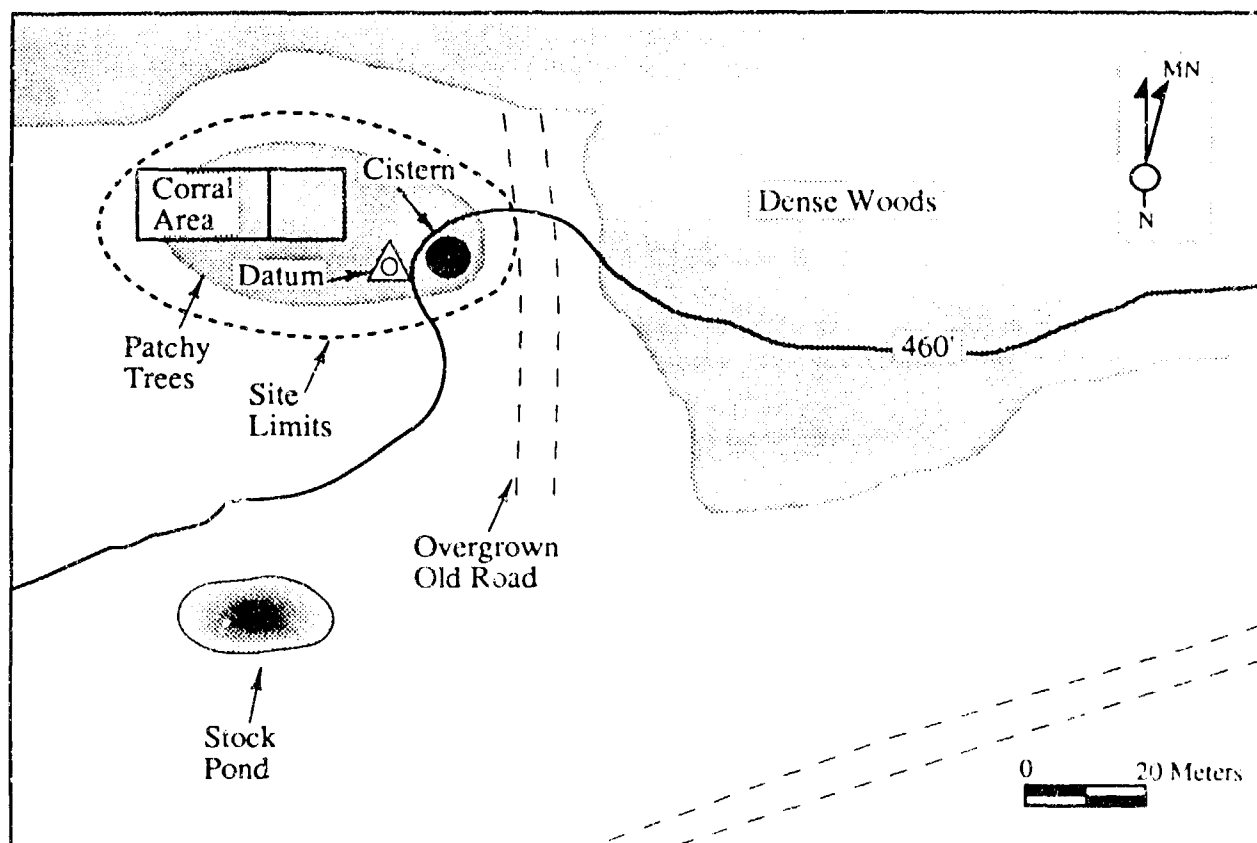


Figure 8-98 Plan of site 41DT183, showing locations of site limits (as defined by surface artifacts), site datum, surface features, and land modifications at site 41DT183.

boundary at 10 cm below ground surface. Some historic artifacts were observed in eroded portions of this stratum around the cistern.

Stratum III is a dark grayish brown (10YR4/2) loam. It has many fallow field rootlets. The majority of artifacts from the site are assumed to be derived from this stratum.

Archival Information

Site 41DT183 is located on a land tract which was a script grant to Robert Carson (S-328). Such land grants were given by the State of Texas for monetary consideration or payment of services. The land certificate was patented November 27, 1863, and was surveyed on December 19, 1866. No houses or roads are shown at the location of 41DT183 on the 1914 field survey of the Delta and Hopkins Levee Improvement District (published in 1924). Three houses are shown on the southern boundary of the Robert Carson

Survey, well outside of the project area. The WPA files were unavailable (lost or destroyed in the Delta County Courthouse) for this survey.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and surface collections. The site consists of the remains of a twentieth century farmstead measuring 60 m x 40 m (see Figure 8-98). A stock pond, fenced corral, fence posts, and collapsed and filled cistern lined with machine-made brick (post-1900) are present. The pedestrian survey consisted of surface collections only. A scatter of machine-made brick measuring 4 m x 5 m was adjacent to the cistern.

The historic artifact assemblage collected from the ground surface at site 41DT183 consists of one stoneware and two pieces of bottle glass. The stoneware crock has a dry exterior with blue

incised flowers and a Bristol slipped interior. It dates to the early twentieth century. A single manganese solarized bottle glass fragment dates ca. 1880-1920.

Recommendations

The historic artifact assemblage indicates an early to mid-twentieth century date for the occupation of this site. Based on its relatively recent age, this site is judged to be not eligible (Category III) for the National Register. Archival information did not indicate any early or locally significant occupations of the site. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT184

This newly recorded historic farmstead (Figure 8-99) is located along the southern edge of a dirt road that leads into the reservoir from Shiloh Cemetery, 1.1 km (0.7 mi) northwest of the old railroad bed and 1.63 km (1.01 mi) east of FM 1531. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Annona loam. In its native state, this was a slope forest consisting

primarily of post oaks with a post oak savannah and upland prairie to the northwest. A floodplain forest was adjacent to the south. This area has been cleared and intensively cultivated and is in fallow pasture today.

Stratigraphy

Three natural strata comprise the surface soil horizons for the Annona loam, and all were exposed by erosion at site 41DT184. These are discussed in order from oldest (lowest) to youngest (uppermost).

Stratum I is the upper B soil horizon. It is a dark red (2.5YR3/6) clay with an abrupt, wavy boundary 0-23 cm below surface, and a lower boundary at 40 cm below surface. This stratum has been exposed in the road that crosses the site.

Stratum II is a light yellowish brown (10YR6/4) loam. It is the lower A-horizon. Stratum II has a clear wavy upper boundary 0-10 cm below ground surface. Some artifacts were noted along the road, where this stratum has been exposed by erosion.

Stratum III is a dark grayish brown (10YR4/2) loam. It is the surface soil horizon and has been plowed in the past. The majority of all artifacts at site 41DT184 were eroding from this stratum.

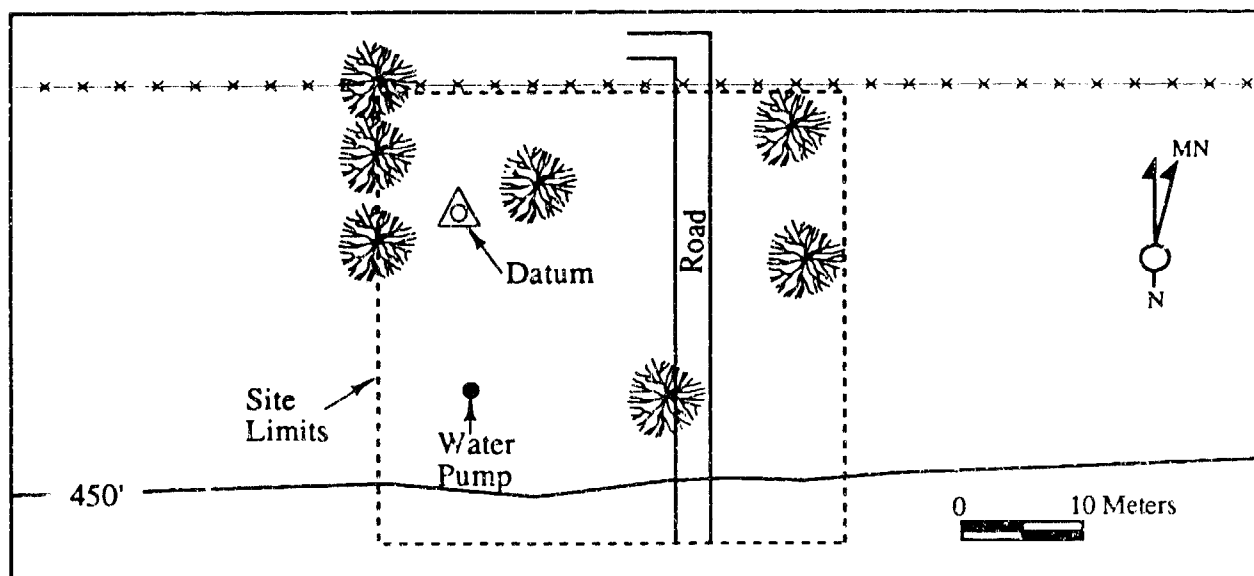


Figure 8-99. Plan of site 41DT184, showing locations of surface features and site limits as defined by surface artifacts.

Archival Information

There was a road shown through the location of site 41DT184 in 1914-1915. Unfortunately, the WPA file for this tract was not in the Delta County Courthouse. Local informants did not provide any information on previous site occupants.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and surface collections. Site area, based on surface scatter of historic artifacts, is ca. 1,600 m² (see Figure 8-99). The only feature observed at the site is a metal pump for a well, which is located along the southern boundary of the artifact scatter. The site may extend northward onto private property.

The historic artifact assemblage recovered from the ground surface consists of 28 items which include: 14 refined earthenwares, three stonewares, eight bottle glass fragments, one piece of window glass, one staple, and one grinding mill. Six ironstone whitewares date ca. 1840-1920, two blue-tinted ironstones date ca. 1850-1910, and a blue sponge-decorated sherd dates ca. 1850-1880. One floral porcelain is dated ca. 1895-1950. Three brown glazed stonewares date ca. 1890-1930. A single identifiable refined earthenware maker's mark reads "Crown C.P. Co." and is from the Crown Pottery Company in Evansville, Indiana. This artifact is dated between 1902 and 1962. A single brown prescription-type, hand-finished bottle neck dates 1850-1890. A cobalt "Vicks" bottle, made by an automated bottling machine, dates from 1910 to the present.

Recommendations

The artifact assemblage indicates a dominant early to mid-twentieth century occupation, with less substantial late nineteenth century occupation. Except for the water pump, the site has been extensively disturbed and has little potential to address the Research Design. The site is considered clearly not eligible (Category III) for the National Register due to this lack of integrity. If future information is found that warrants

additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT185

This newly recorded historic (Figure 8-100) farmstead is located 380 m (1,296.4 ft) west of the railroad bed and 1.02 km (0.63 mi) north of Jernigan Creek. A dirt road is located on the northern boundary of the site. The site lies at an elevation of 137 m (450 ft) above msl on a gentle rise at the northern edge of the Jernigan Creek floodplain near an unnamed intermittent stream. The mapped soil type at the site is Wilson silt loam. In its native state, this area was a slope forest with post oak savannah and upland prairie to the north and a floodplain forest to the south. The area has been cleared and cultivated in the past and is in fallow pasture today.

Stratigraphy

A single soil stratum was identified at site 41DT185. This is a very dark gray (10YR3/1) clay that extends at least 56 cm below ground surface, based on an examination of the stock tank excavation on the northern edge of the site. This stratum has been heavily cultivated in the past. All historic materials were eroding from this stratum.

Archival Information

No road or house is shown at this locality on the 1914-1915 Delta-Hopkins Levee District Map. The WPA file for the tract containing site 41DT185 was not located. A house is shown at this location on the 1941 map of the area. Occupation at the site could not have been much earlier than this, based on the archaeological remains as well as archival information.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and surface collections. The total site area is 8,640 m² based upon surface distribution of sheet refuse and features. A stock pond is present on the northern

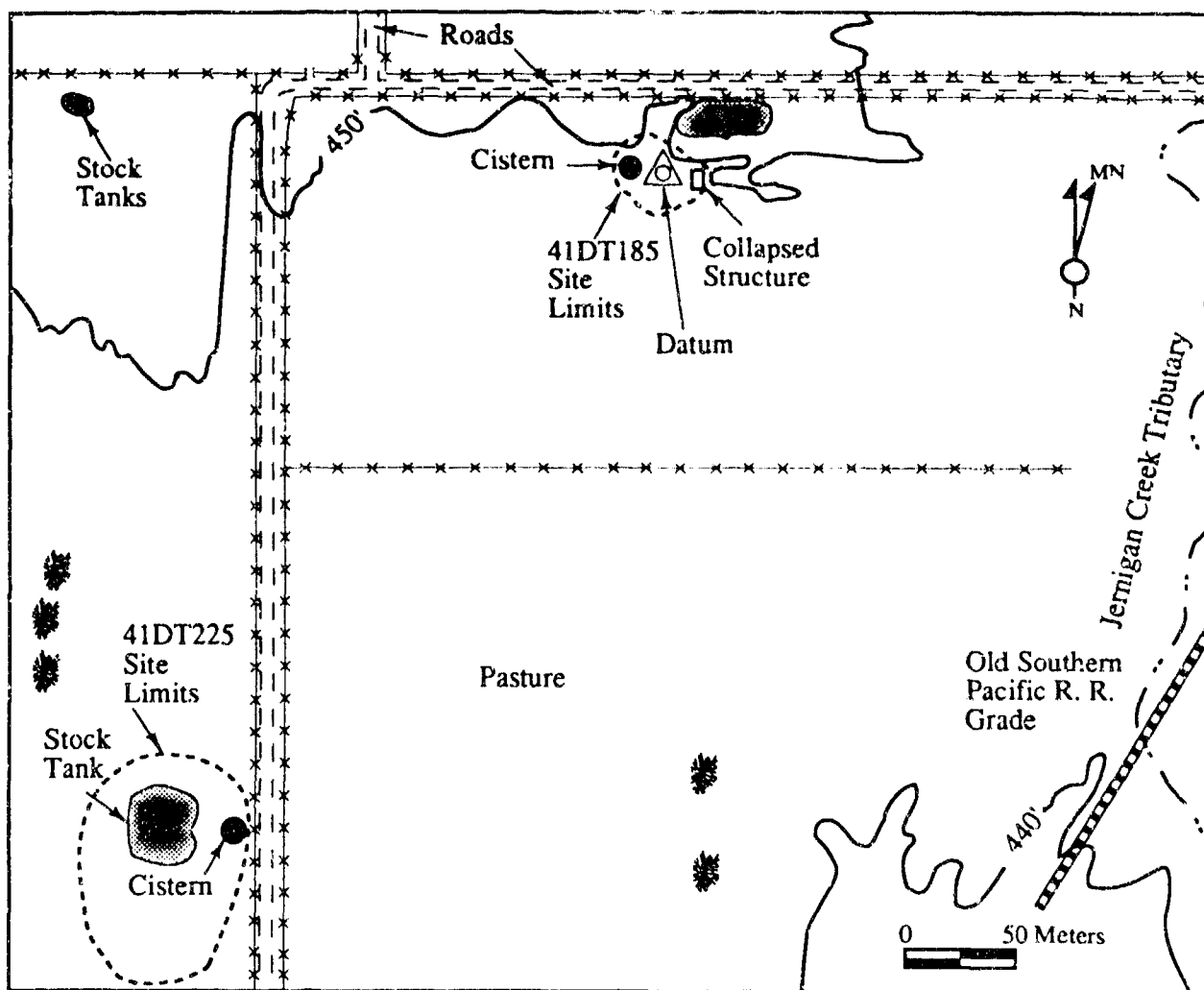


Figure 8-100. Plan of sites 41DT185 and 41DT225, showing site limits as defined by surface artifacts.

edge of the site, and the remains of a collapsed structure, possibly a house, are located 25 m to the south of the stock pond. A cistern lined with machine-made brick is located 35 m west of the collapsed structure (see Figure 8-100).

The artifact assemblage from 41DT185 consists of 40 items, including five refined earthenwares, two stonewares, 21 pieces of bottle glass, two table glass fragments, one window glass fragment, one wire nail, one machine-made brick, two milk glass canning lids, one agate (glazed redware) doorknob, one stove part, and three mussel shells. The ironstone whiteware dates ca. 1870–1910. One floral decalcomania fragment is dated between 1895 and 1950. The brown glazed stonewares date ca. 1890–1930. One manganese solarized bottle glass dates between 1880 and

1920. Six clear glass fruit jars with continuous threads date from 1890 to the present.

Recommendations

Due to its recent age, this historic site has little potential to address the chronological, material culture, and settlement questions outlined in the Research Design. The site is deemed not eligible (Category III) for the National Register because it has low potential to yield important information. Archival information does not indicate any local historical significance. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at the present time.

Site 41DT186

This newly recorded historic farmstead (Figure 8-101) is located 2 km (1.2 mi) south-southwest of Klondike on the east side of a dirt road that leads into the reservoir from Klondike. The old railroad bed is located 1.2 km (0.74 mi) west of the site. Elevation at the site varies between 137 m (450 ft) and 140 m (460 ft) above msl. The mapped soil type at the site is Deport clay. In its native state, this area was a slope forest with post oak savannah and upland prairie to the north and a floodplain forest to the south. It has been cleared and intensively cultivated in the past and is in fallow field pasture today.

Stratigraphy

The Deport soils are deep, clayey soils on uplands which have formed from clay and shale. The soils are characterized by an Ap-horizon over AC- to C-horizons. The single natural soil stratum identified at site 41DT186 is a dark gray (10YR4/1) clay with few roots. It yielded all of the historic artifacts which were recovered from this site.

Archival Information

Site 41DT186, along with sites 41DT208, 41DT209, and 41DT249, is located on the William Kimble Survey (A-208, C272). Approximately 1.2 ha (3 acres) of this original survey tract were set aside for the Friendship Church, School, and Cemetery (see site 41DT180). This was a 203.6 ha (503 acre) grant to William Kimble, and was transferred and patented to Jacob C. Chisholm on July 22, 1852 (Delta County Deed Book I-H: 459).

The site is not shown on the 1914 Levee Improvement Map, but a road is shown in this vicinity. In 1936, the 17.4 ha (43 acre) tract containing 41DT186 was owned by Mrs. W. A. Wallace of Klondike, who leased it to tenants. At that time, 0.8 ha (2 acres) was reserved for the home, 0.8 ha (2 acres) for the garden, 14.2 ha (35 acres) were in cultivation (8.9 ha [22 acres] oats and 5.3 ha [13 acres] cotton), 0.8 ha (2 acres) was pasture and 0.8 ha (2 acres) was wasteland. Mrs.

Wallace obtained the property in 1924, for \$5,000 (Delta County Deed Book 58: 353). The house was a 1½-story building measuring 40 ft x 28 ft, and contained six rooms. A shed and barn were also present.

Site 41DT186 was reported to be the house site of Eliza and John Hancock who were tenant farmers at the site during the second and third quarters of the twentieth century (see Chapter 7). They were reported to have had a sorghum mill on their property. Neither have marked tombstones that indicate if they are buried in the Friendship Cemetery. It is presumed that they moved away from the area in the 1970s.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, test excavations, and surface collections. The site size is 3,000 m². A stock pond is located 50 m north of a brick (machine-made) chimney base (see Figure 8-101). A wooden foundation post is located 10 m east of the chimney, and the remains of a brick (machine-made) cistern and associated brick (machine-made) pavement are located 10 m north of the chimney base. The site has been recently used as a cattle corral, as evidenced by a cattle loading chute and barbed wire fencing.

Eighteen shovel tests were excavated to determine site limits. Eleven of these units produced artifacts, all of which were recovered from Stratum 1, the modern plow zone. Table 8-20 lists the proveniences for various artifact categories. The majority of architectural items (i.e., other than brick) were recovered north of the fence around the former dwelling area adjacent to the collapsed cistern. Vessel glass was distributed across the entire site.

One blue-tinted ironstone dates between 1850 and 1910. The brown glazed stonewares date ca. 1890-1930. A single porcelain doll leg with blue garter dates ca. 1870-1940. Two automated bottling machine medicine bottles date from 1910 to the present, and two continuous-thread clear fruit jars date from 1870 to the present. One Hazel Atlas maker's mark on another fruit jar dates between 1920 and 1964. Other historic artifacts include a door lockplate, a cotton hoe, an

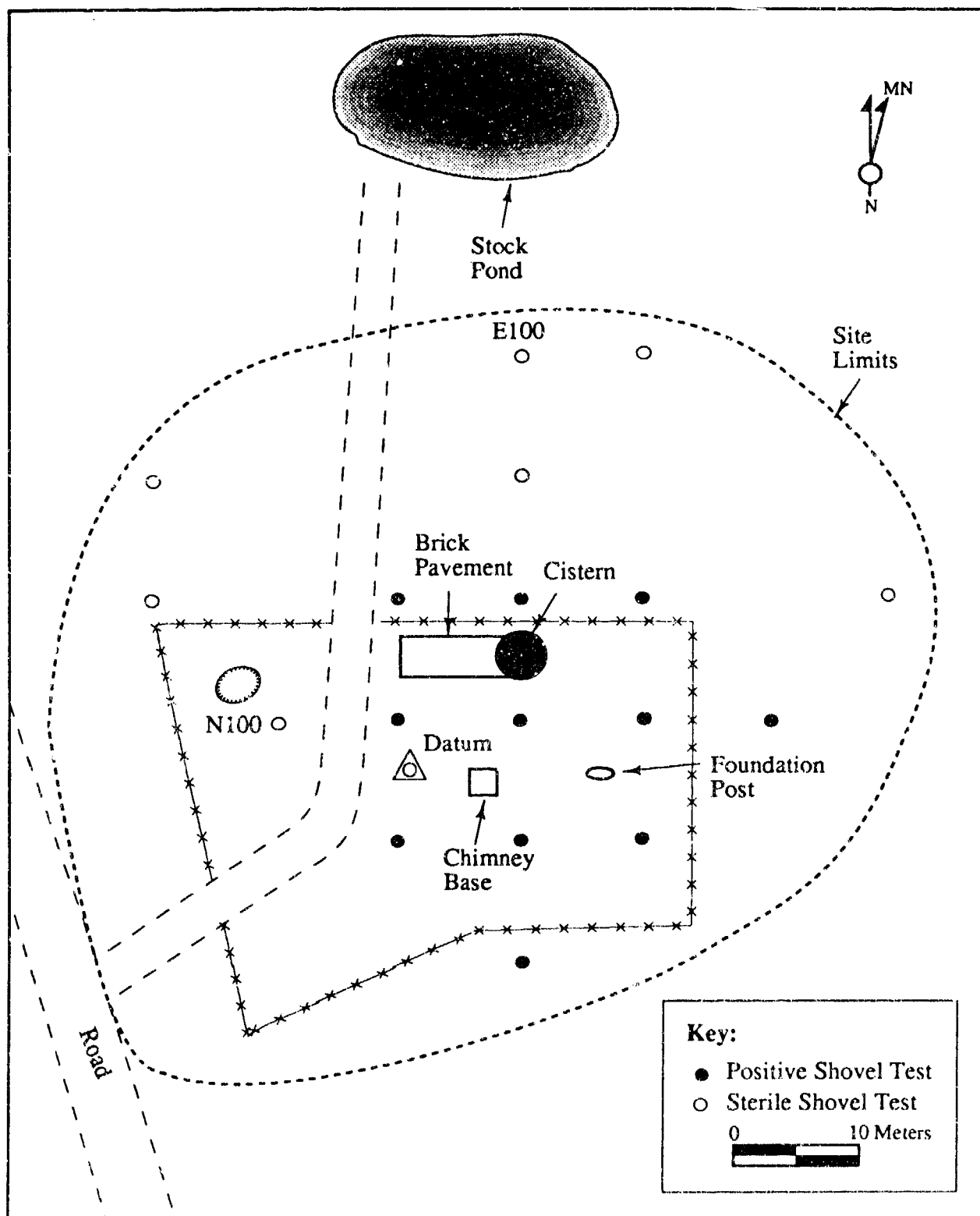


Figure 8-101. Plan of site 41DT186, showing locations of shovel tests, site limits (as defined by surface artifacts and positive shovel tests), surface features, and land disturbances at site 41DT186.

TABLE 8-20

Distribution of Artifacts from Site 41DT186,
Delivery Order Number 7 Study Area

Unit	Ref E-ware	Stone- ware	Mang Vglass	Other Vglass	Wdw glass	Wire nails	M-M brick	Pers	H&S	Misc	Bone	Total
N80E100	—	—	—	3	—	2	6	—	—	—	—	11
N90E90	—	—	—	—	—	—	2	—	—	—	—	2
N90E100	—	—	—	5	—	—	—	1	—	1	—	7
N90E110	—	—	—	40	—	—	1	—	—	1	—	42
N100E100	—	—	—	1	—	—	—	—	—	—	3	4
N100E110	—	—	—	19	—	—	4	—	—	—	1	24
N100E120	—	—	1	—	—	—	1	—	—	—	—	2
N100E130	—	—	—	1	—	—	1	—	—	—	—	2
N110E90	—	—	—	2	—	—	—	—	—	—	—	2
N110E100	4	—	—	9	—	5	1	—	—	10	—	29
N110E110	3	1	—	20	3	8	3	2	—	2	1	43
Surface	11	2	2	5	1	2	1	2	1	2	—	29
Total	18	3	3	105	4	17	20	5	1	16	5	197

KEY: Ref E-ware = refined earthenware; Mang Vglass = manganese vessel glass; Other Vglass = other vessel glass; Wdw glass = window glass; M-M = machine-made brick; Pers = personal items; H&S = horse and stable gear; Misc = miscellaneous artifacts.

andiron fragment, a gear shift lever with hard rubber attachment, and fragments of linoleum. One fragment of writing slate was also recovered.

Vessel glass was the dominant artifact category at this site, indicating consumption of bottled commodities and on-site disposal of the vessels. Only three fragments of manganese solarized glass (ca. 1880-1920) were recovered.

Recommendations

The occupation of this site apparently began in the late nineteenth century, with intense early to mid-twentieth century occupation. Although the site's occupation by African Americans has potential to yield significant information on subsistence, settlement, and ethnicity in the study area, it is also very likely that the separability of this component has been obscured by the serial occupancy of the site by tenant farmers. The recent and intensive use of the site for ranching has reduced the site's archaeological integrity.

Although the site reportedly had a light industrial function (i.e., as a sorghum mill), no archaeological evidence of that function remains. The site is considered clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT187

This historic farmstead (Figure 8-102) is located at the east end of a dirt road that extends east from the Free Hope Church. The site is 1 km (0.6 mi) east of the church and 1 km (0.6 mi) north of the South Sulphur River. Site elevation is 132.5 m (435 ft) above msl, and the mapped soil type is Benclin silt loam. In its native state, this area was a post oak savannah adjacent to a floodplain forest.

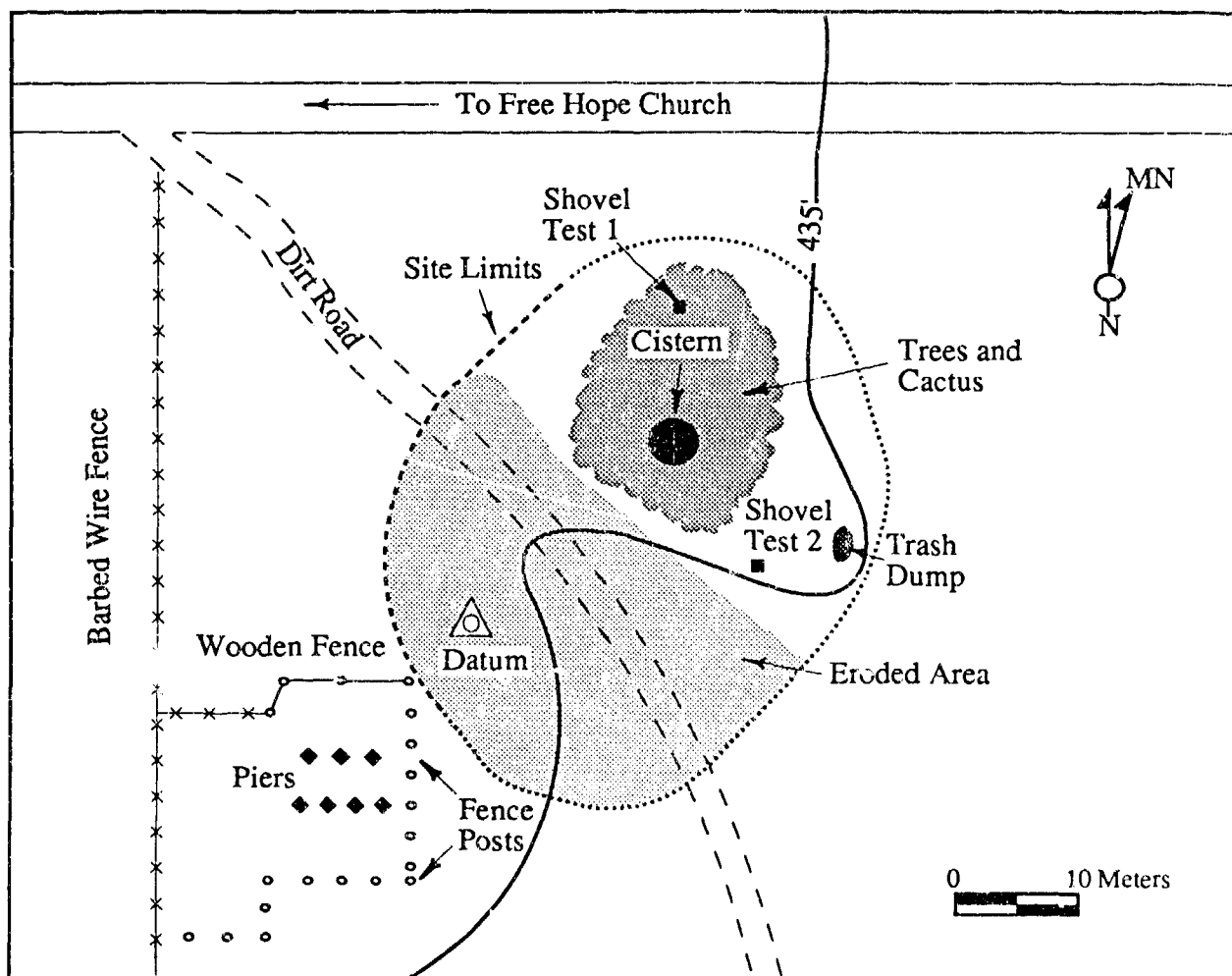


Figure 8-102. Plan of site 41DT187, showing locations of shovel tests, site limits (as defined by surface artifacts), site datum, surface features, and land disturbances.

Stratigraphy

The Benklin silt loam soil series consists of deep, loamy soils on uplands. These soils, formed in Pleistocene alluvial deposits, are present on low terraces of major streams. The two natural soil strata identified at site 41DT187 are discussed below in order from older (lower) to younger (upper).

Stratum I is a very dark brown (10YR2/2) loam that commonly contains root systems. It has an abrupt, smooth upper boundary at 15 cm below surface and was excavated to a maximum depth of 30 cm below ground surface. Few cultural materials were present in this stratum. Stratum I is exposed in 50% of the defined site area.

Stratum II, the surface soil horizon, is the

modern plow zone. It is a very dark grayish brown (10YR3/2) silt loam with many fine roots. The majority of all historic artifacts were recovered from this stratum.

Archival Information

Site 41DT187 is reported to be the house site of the Jackson and Kelly families (see Chapter 7). In 1936, this site was located on a 1.2 ha (3 acre) tract of land belonging to Jennie Jackson, who had obtained the property in 1928 (Delta County Deed Book 63: 200). At that time 0.1 ha (0.25 acre) was reserved for the home, 0.1 ha (0.25 acre) for the garden, and 1.0 ha (2.5 acres) was in cultivation. The home was listed as a shack measuring 21 ft x 28 ft. A shed was also present.

A house is shown at this location on the 1914 Levee Improvement District Map of this area.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and surface collections. The site was revisited in the summer of 1990, when two shovel tests were excavated. Both were culturally sterile. The site size is 2,500 m², an area which includes the post-occupational ranching facilities. Wooden post supports for a structure were identified in the eastern part of the site (see Figure 8-102). A cistern lined with machine-made (i.e., twentieth century) brick is located 30 m to the northeast. The cistern measured ca. 3 ft high and consisted of cement-coated bricks. The site has recently been used as a cattle corral, as evidenced by the presence of wooden fence posts and barbed wire fences (see Figure 8-102).

The artifact assemblage collected from the ground surface at 41DT187 consists of 56 items, including five refined earthenwares, seven stonewares, 22 bottle glass fragments, 10 pieces of table glass, one machine-made brick, seven milk glass canning lid fragments, one zinc canning lid, two stove parts, and an iron rod.

The ironstone whitewares date ca. 1850-1910. The brown-glazed stonewares date between 1890 and 1930. One aqua double-ring, hand-finished bottle neck dates ca. 1850-1920. A brown snuff bottle and milk glass cold cream jar were made by an automated bottling machine and date from 1910 to the present. Three fragments of manganese solarized bottle glass and six table glass fragments date between 1880 and 1920. Two rim fragments of a continuous-thread bottle with a ground lip date ca. 1870-1900.

Recommendations

Site 41DT187 is the farmstead of Jennie Jackson, who occupied the site from 1928 to at least 1936. The house site is shown as early as 1914, and the archaeological remains indicate a late nineteenth to mid-twentieth century occupation. Despite the site's occupation by

someone of presumed African American descent, the serial ownership and intensive ranching have reduced its archaeological integrity. The site is considered to be not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT188

This newly recorded historic farmstead (Figure 8-103) is located on a terrace 700 m (2,296 ft) southwest of Johns Creek and 1.06 km (0.7 mi) northeast of the Free Hope Church. Site 41DT189 lies 120 m (393.6 ft) due west of the site, and site 41DT232 is immediately adjacent on the east. Elevation at the site is 135 m (443 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this area was a post oak savannah on a slope or low terrace landform. This area has been cleared and intensively cultivated in the past and is in fallow pasture today.

Stratigraphy

Two natural strata were identified at site 41DT188. These strata are discussed in order from older (lower) to younger (upper). Stratum I is the upper B soil horizon of the Normangee clay loam. It is a brown (10YR4/3) clay with a clear wavy upper boundary at 18 cm below ground surface and an average depth of 40 cm below ground surface. This stratum is culturally sterile and continuous at site 41DT188.

Stratum II is the surface soil horizon which is the modern plow zone. It is a dark brown (10YR3/3) clay loam. All cultural materials are assumed to be derived from this stratum.

Archival Information

A house is shown at this location on the 1914 Levee Improvement District Map of the area. Informants did not identify any of the previous occupants or owners. The WPA files for this tract were not available.

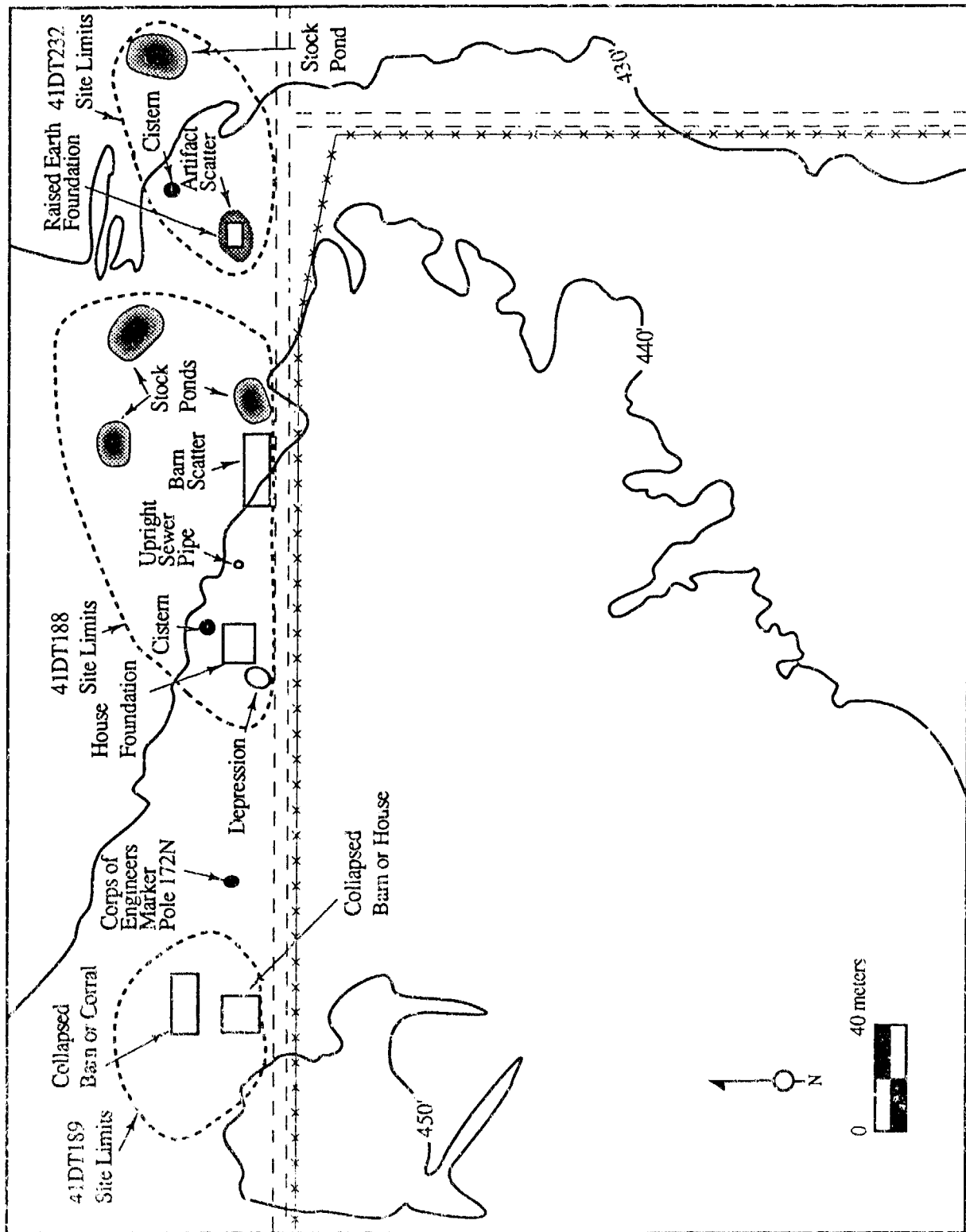


Figure 8-103. Plan of sites 41DT188, 41DT189, and 41DT232, showing site limits as defined by surface artifacts and features.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and surface collections (Figure 8-104). The total site area is 1,900 m². Features are present at the site and are bounded on the south side by a barbed wire fence. The remains of a collapsed barn or shed are located at the east end of the site; wooden planks, tin, cement, and scattered machine-made bricks are present in a 225 m² area. A cistern lined with machine-made brick is located 40 m west of this structure. A possible house foundation (poured concrete) is located 10 m southwest of the cistern. A subsurface depression, which may have been a storm shelter, is located 20 m west of the foundation.

The artifact assemblage recovered from the ground surface at 41DT188 consists of 35 items, including six refined earthenwares, a stoneware fragment, 18 pieces of bottle glass, three table glass fragments, three flat glass fragments, a glass marble, a door latch plate, one hinge, and one

ceramic drainage or sewer tile (possibly related to the cistern).

The ironstone whiteware (ca. 1840–1900) ceramic assemblage includes a relief molded rim, which may be a shell-edged rim variant dating ca. 1840–1880(?). A whiteware (ca. 1890–present) with a green-printed geometric maker's mark is also part of this assemblage. A complete Coca-Cola bottle from Paris, Texas, has a patent date of 16 November 1915.

Recommendations

The site appears to represent a historic farmstead that was occupied at the turn of the twentieth century. Due to an intense, recent mid-twentieth century occupation, however, 41DT188 has little potential to address the chronology, material culture, and settlement questions in the Research Design. The site is deemed not eligible (Category III) for the NRHP. Should information be found that warrants additional consideration, it will be reevaluated for NRHP eligibility. No further work is recommended at this time.

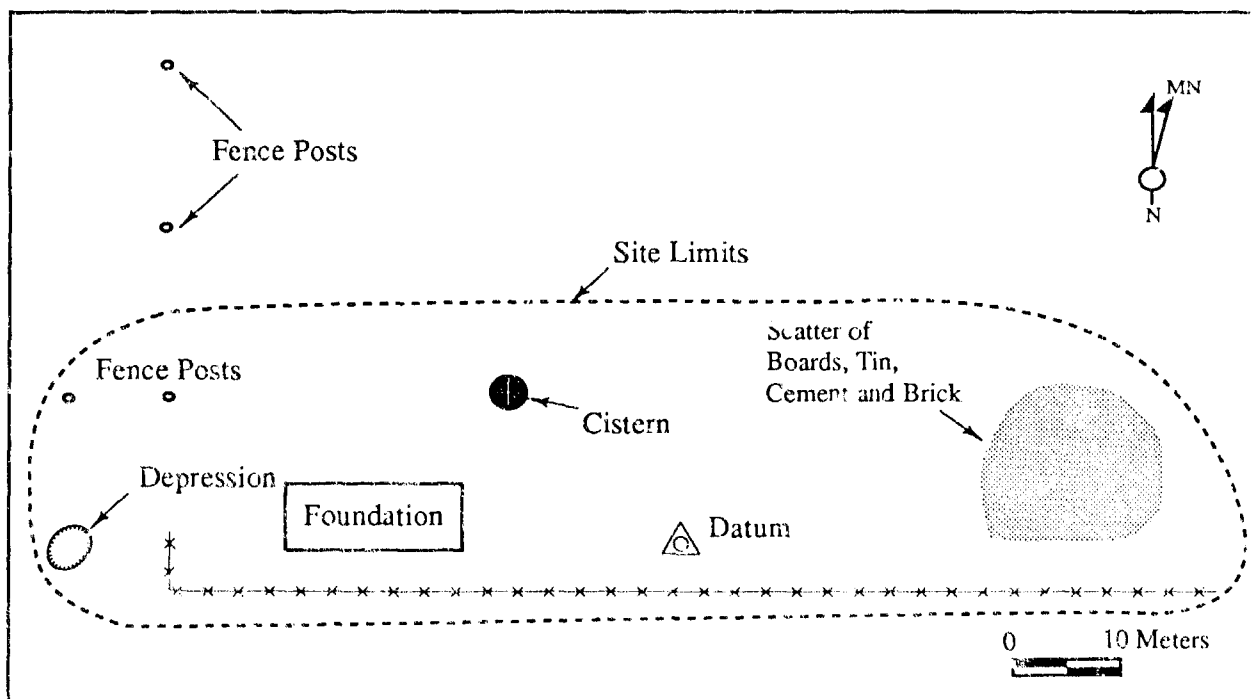


Figure 8-104. Plan of site 41DT188, showing site limits as defined by surface artifacts and features.

Site 41DT189

The newly recorded historic site (see Figure 8-103) is located on the north side of a small rise on the southwest side of the Johns Creek floodplain. An unnamed, intermittent drainage which empties into Johns Creek, lies 360 m (1,180.8 ft) north of the site. The site is 980 m (3,214.4 ft) northeast of the Free Hope Church site and 1.84 km (1.14 mi) southeast of Klondike. Site 41DT188 is 120 m (393.6 ft) east of the site. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this area was a post oak savannah. A floodplain forest was to the east. This area has been cleared and intensively cultivated in the past, and is presently fallow pasture.

Stratigraphy

Two natural soil strata were identified at site 41DT189. These strata are discussed in order from the older (lower) to younger (upper). Stratum I is the upper B soil horizon of the Normangee clay loam. It is a brown (10YR4/3) clay, with a clear wavy upper boundary at 18 cm below ground surface and an average depth of 40 cm below ground surface. This stratum is assumed to be culturally sterile and continuous at the site.

Stratum II is the surface soil horizon which is the modern plow zone. It is a dark brown (10YR3/3) clay loam. All cultural materials are assumed to be derived from this stratum.

Archival Information

Site 41DT189 is located on the Jesse B. Bowman (A-20) Survey, an extremely large grant with intricate boundaries that extends from Klondike to Cooper. In all likelihood, Bowman never resided in the vicinity of the site or adjacent site 41DT188. Site 41DT189 is not shown as containing a domicile on the 1941 highway map of Delta and Hopkins counties, but a barn is shown at the 1964 USGS map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included

close interval (5 m) pedestrian survey and mapping. The site covers an area of 1,250 m² with features and artifacts associated with modern farming or cattle raising (see Figure 8-103). The remains of two structures are present at the site. In the southern part of the site, there are remains of a collapsed structure, possibly a house. Another collapsed structure is located 15 m north of this structure, and may have been a barn. Lumber, nails, and recent demolition debris are scattered across the site. No collections were made from the site due to the recent age of the cultural materials.

Recommendations

Site occupation is thought to date from ca. 1941 to the 1980s. The site has been impacted by erosion and traffic from cattle grazing. Due to these extreme post-occupational impacts and the recent age of the identified cultural materials, this site is judged to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT190

This newly recorded historic farmstead (Figure 8-105; see Figure 8-53) is in a slope/upland setting within an open pasture. This property is on the south side of the road that extends east from the Free Hope Church, to a point 660 m (2,164.8 ft) east of that church. This site's spatial relationship to adjacent sites 41DT14 and 41DT19 is shown in Figure 8-53. A south-trending road borders the site on the west. Elevation at the site varies between 132 m (433 ft) and 134 m (440 ft) above msl. An intermittent drainage lies 108 m (354 ft) east of the site. The mapped soil type at the site is Wilson silt loam. In its native state, this area was a post oak savannah. It has been cleared and intensively cultivated, and presently is in fallow pasture.

Stratigraphy

Two natural soil strata were identified at site 41DT190. These strata are discussed in order from the older (lower) to the younger (upper).

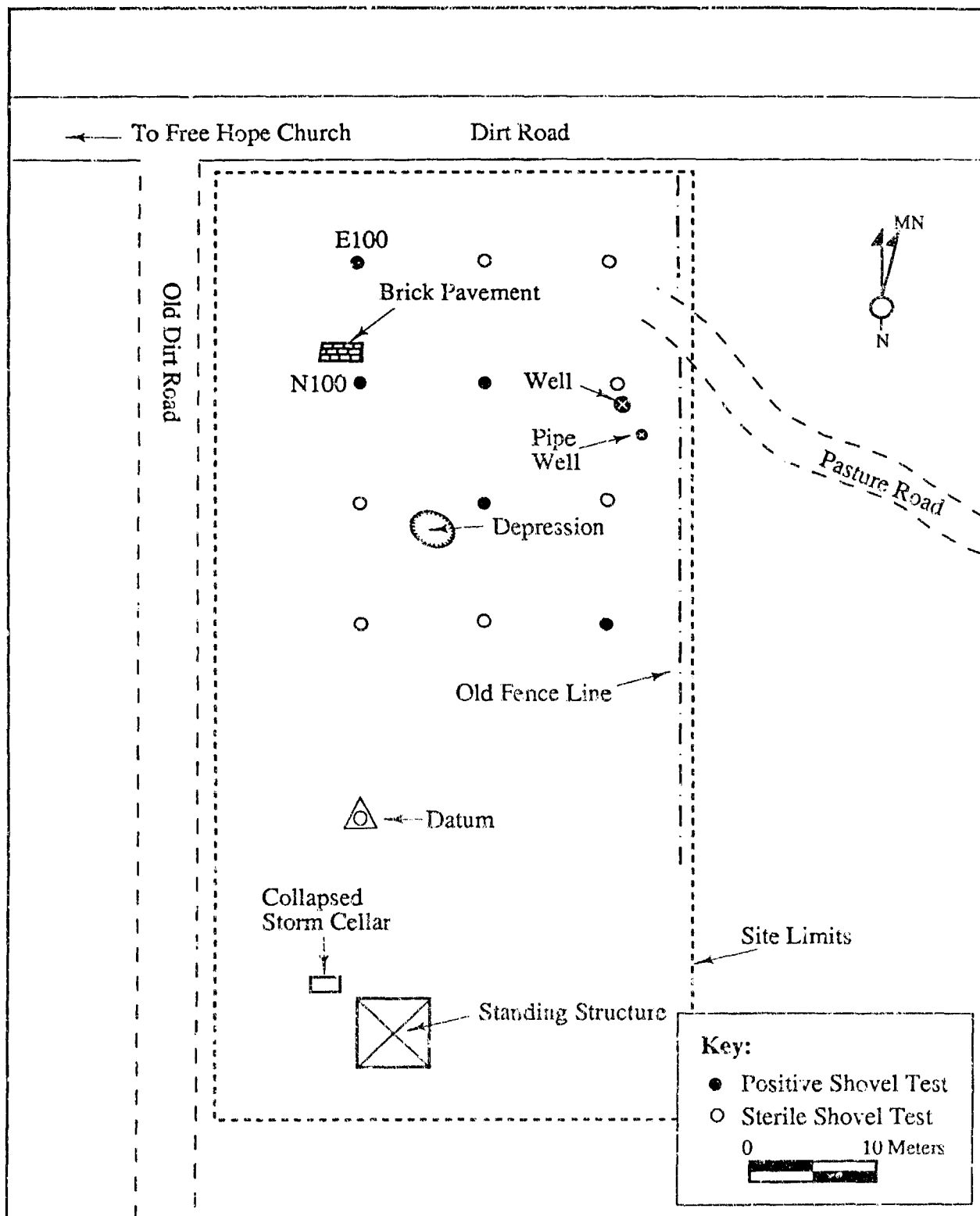


Figure 8-105. Plan of site 41DT190, showing locations of shovel tests, surface artifacts and features, site limits, and land disturbances.

Stratum I is the upper B soil horizon. It is a very dark gray (10YR3/1) clay, with an abrupt wavy boundary at 13 cm below ground surface. It is assumed to be continuous across the site locus, and has an average depth of 56 cm below ground surface. Stratum I is culturally sterile.

Stratum II is the surface soil horizon and is the modern plow zone. It is a very dark gray (10YR3/1) clay loam. All cultural materials are derived from this stratum.

Archival Information

Informants report that this is the I. W. Jones house site (see Chapter 7), which was inhabited by Ike and Fanny Jones. This property was a tenant farmstead that was occupied until the 1970s. A house is shown at this location on the 1914 Levee Improvement District Map of this area when it was published in 1924. An interview with Hack Henderson of Klondike (see Chapter 7) indicated that a log cabin once stood close to this house, but was destroyed by fire at some unknown point in the past.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included

close interval (5 m) pedestrian survey, shovel testing, and mapping. Shovel probes were also excavated beyond the site limits to investigate the potential for buried cultural deposits across the landform. The maximum site area is 3,600 m². A standing wooden frame house with a sheet metal roof, a machine-made brick pavement, a collapsed cistern lined with machine-made bricks, and a drilled metal pipe well were present at the site (see Figure 8-105). The structure is in extremely poor condition and is not far from collapsing. Twelve shovel tests were excavated north of the standing house, around the brick pavement and well. Five of these tests were positive, indicating a twentieth-century occupation.

Table 8-21 lists the artifacts recovered from shovel probes and surface collections at 41DT190. The artifact assemblage consists of 39 items, including six refined earthenwares, seven stonewares, two porcelains, 13 pieces of bottle glass, two window glass fragments, one wire nail, two machine-made brick fragments, one ceramic doorknob, one copper makeup case, one copper fragment, and a 1936 silver half dollar.

The porcelain has a geometric green decalcomania and dates from ca. 1940 to the present. The relief-molded, blue-tinted stonewares date to the early twentieth century. The 1936 half dollar exhibits little wear. One continuous-thread

TABLE 8-21

Distribution of Artifacts from Site 41DT190,
Delivery Order Number 7 Study Area

Unit	Depth (cm)	Refined E-ware	Stone- ware	Porce- lain	Vessel Glass	Window Glass	Wire Nails	Misc	Total
N80E120	0-10	—	—	—	—	—	—	1	1
N90E110	—	—	—	—	1	—	—	—	1
N100E100	0-20	5	—	—	2	—	—	2	9
N100E110	0-20	—	—	—	10	—	1	—	11
N110E100	0-5	—	—	—	—	—	—	1	1
Surface	0	1	7	2	—	2	—	4	16
Total		6	7	2	13	2	1	8	39

clear condiment bottle has a "Knox" maker's mark dating between 1917 and 1956. The half dollar, the majority of the vessel glass fragments, and the other items exhibit various forms of thermal alteration, suggesting that the house contained household items at the time of its burning.

Artifacts around the standing structure appear to date from the post-World War II era to the present. No collections were made in this area of the site.

Recommendations

This farmstead was occupied in the early to mid-twentieth century. Based on informant and archival information, this site may yield information relevant to the socioeconomic status of rural ethnic groups (Moir, McGregor, and Jurney 1993:61). The site is considered to be of unknown eligibility (Category II) for nomination to the National Register. Further evaluations are recommended.

Site 41DT191

This historic farmstead (Figure 8-106) is located in a slope/upland setting on the south side of the road that extends east from the Free Hope Church. It is 420 m (1,377.6 ft) east of the church and 330 m (1,082.4 ft) north of Honey Creek. An unnamed drainage running into the South Sulphur River lies 140 m (459.2 ft) northwest of the site. Elevation at the site is between 134 m and 136 m (440 and 445 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was a post oak savannah with adjacent upland prairie. Cleared and intensively cultivated in the past, 41DT191 is fallow pasture today.

Stratigraphy

Two natural soil strata were identified within the 41DT191 site locus. These strata are described in order from the older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt, wavy boundary at 20 cm below surface and an average depth of 43 cm below ground surface. This stratum is assumed to be continuous across site 41DT191 and is culturally sterile.

Stratum II, the surface soil horizon at site 41DT191, is the modern plow zone. It is a dark grayish brown (10YR3/2) loam. All artifacts collected at this site are derived from Stratum II.

Archival Information

A house is shown at this general location on the 1941 highway map of the area. No earlier maps indicate a dwelling on this location. Informants were unable to report the names of any former tenants or occupants. The WPA files do not indicate any occupants of this site. The house at this site was still standing in 1975 when the U.S. Department of Agriculture took aerial photos of the area.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, shovel testing, and mapping. A single shovel test (35 cm x 35 cm x 15 cm) was excavated between a collapsed house and a cistern. No artifacts were recovered from this unit, which was then used to place the permanent datum. Site area is 3,200 m².

The artifact assemblage collected from the ground surface at 41DT191 consists of 14 items: five refined earthenwares, two stonewares, four bottle glass fragments, one wire nail, one machine-made brick, and a 1956 Texas license tag.

The stoneware is a blue-glazed handle from a vessel dating to the early twentieth century. Another brown-glazed stoneware dates ca. 1890–1930. One continuous-thread medicine bottle and an automated bottling machine bottle base date from 1910 to the present.

Recommendations

This farmstead dates from the early to the mid-twentieth century. Due to its recent age and the fact that archival and informant researches do not indicate historical significance, the site has low potential to address the chronological, ethnic, material culture, and settlement questions outlined in the Research Design. Site 41DT191 is thought to be clearly not eligible (Category III) for nomination to the National Register.

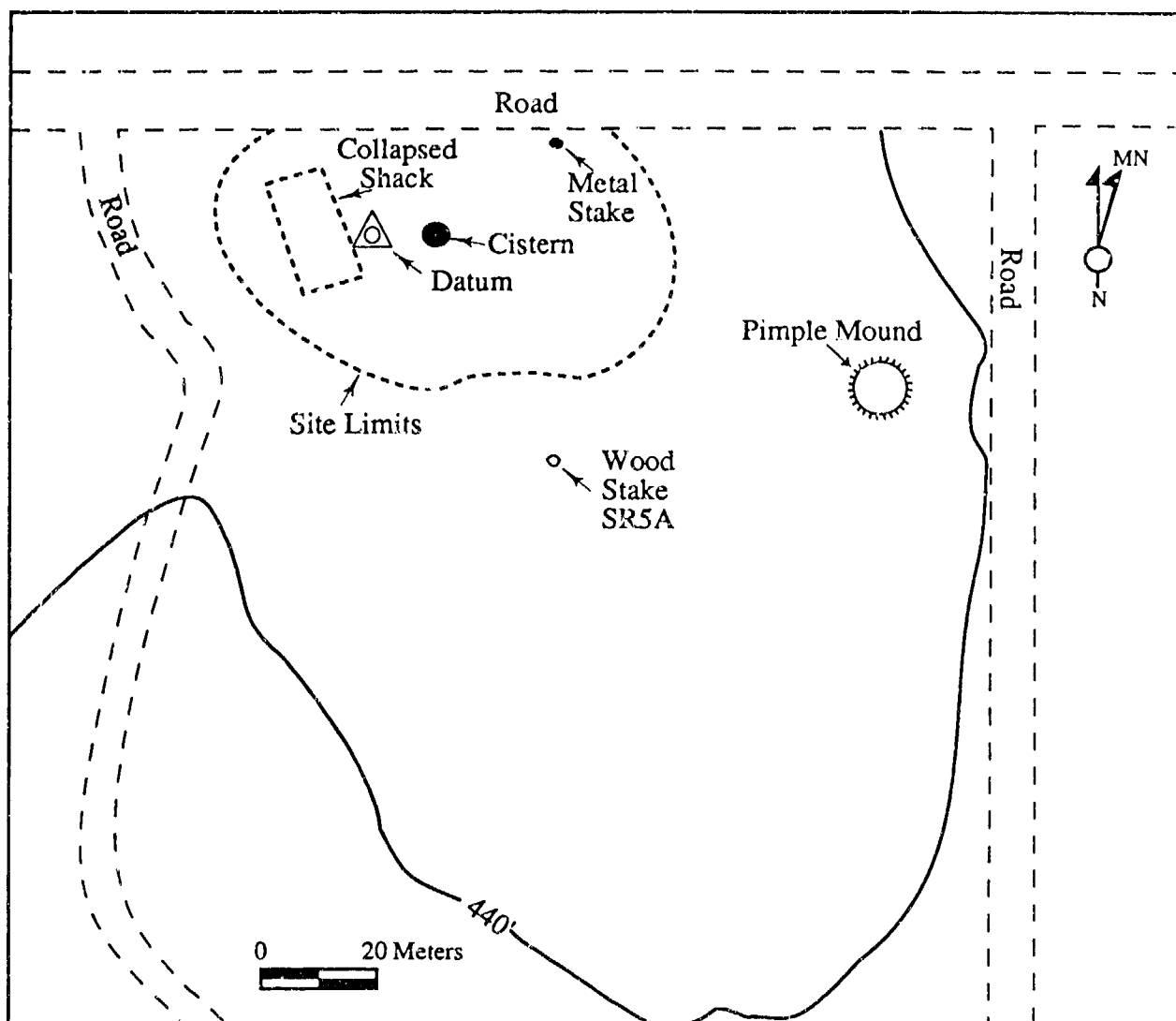


Figure 8-106. Plan of site 41DT191, showing locations of site limits (as defined by surface artifacts), surface features, and land modifications.

If future information is found that warrants additional consideration, site 41DT190 will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT192

This historic farmstead (Figure 8-107) is located near the Free Hope Church. The site lies on upland pasture 200 m (656 ft) north of Honey Creek at 137 m (450 ft) above msl. The mapped soil type is Normangee clay loam.

In its native state, this area was a post oak savannah. It has been cleared and intensively

cultivated in the past and presently is a fallow pasture.

Stratigraphy

Two natural soil strata were identified at the 41DT192 site locus. These strata are discussed in order from the older (lower) to younger (upper). Stratum I, the upper B soil horizon, is a brown (10YR4/3) clay with a clear wavy boundary 0-18 cm below surface. Its maximum depth is 40 cm below surface. It is continuous across the site, and has been exposed by erosion over 10-15% of the site's northern portion. Stratum I is culturally sterile.

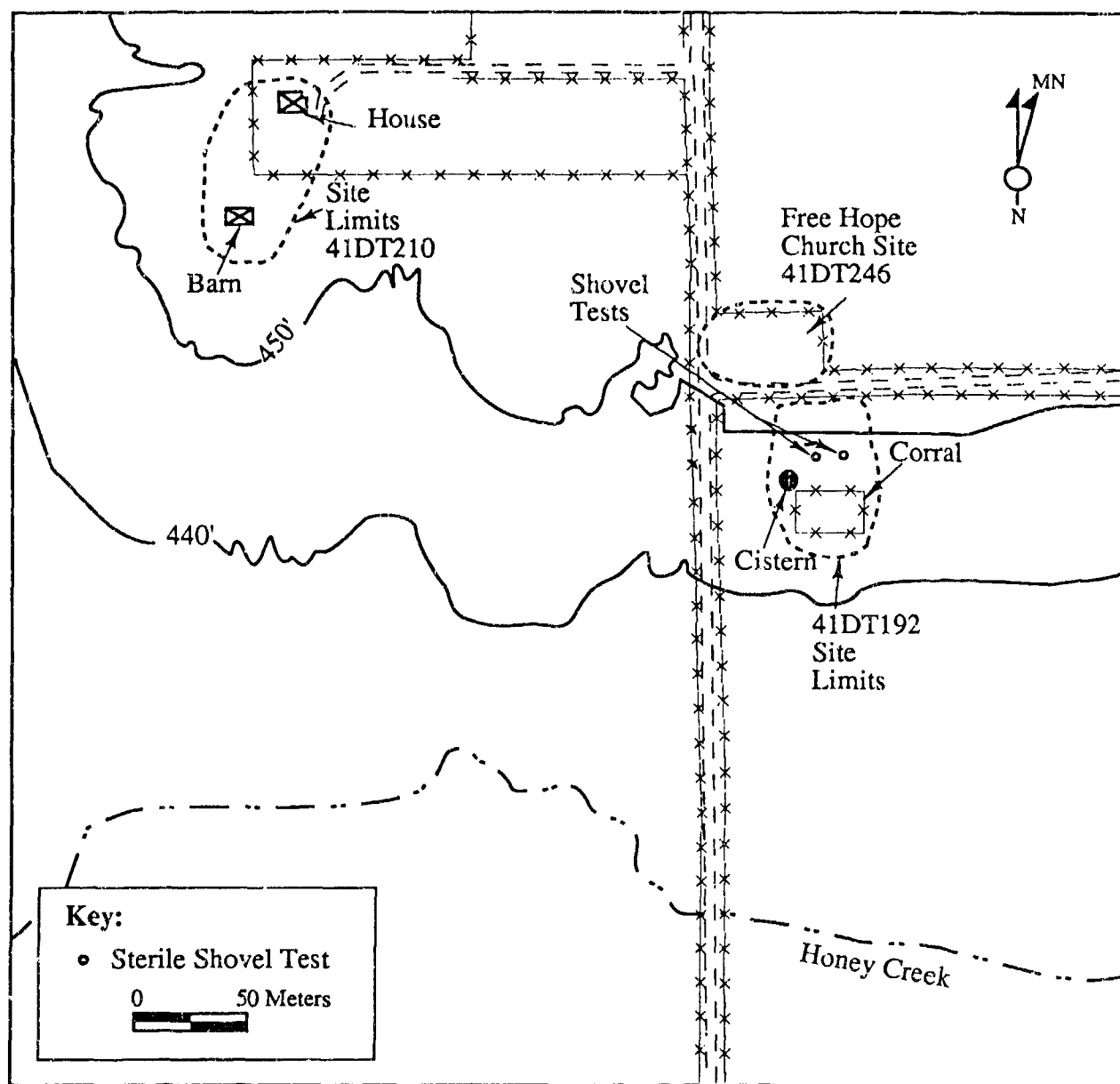


Figure 8-107. Plan of sites 41DT192, 41DT210, and 41DT246, showing site limits as defined by surface artifacts and features.

Stratum II, the surface soil horizon, is the modern plow zone. It is a dark brown (10YR3/3) clay loam. All cultural materials are derived from this stratum, which ranges in depth 0-18 cm below ground surface.

Archival Information

Informant interviews with Jeff Blandon, Charles "Hack" Henderson, and Ina Blount have

indicated that John Derrick, an African American, lived at the site during the early to middle twentieth century. He operated a sorghum (molasses) press at the site and cooked the juice to produce sorghum syrup, which he then sold. John also had a small store attached to his house, where he sold candy, snuff, and tobacco. In addition to this business, his wife, Rosie, ran a restaurant. Mr. Henderson stated that the sorghum press was mule-driven, and the oven was built with brick.

To cook the juice, metal tubs or containers were placed on top of the brick oven. The feature present in the corral is thought to be the remains of this oven. Mr. Henderson also stated that two houses were at the site, presumably after the molasses making had ceased. A house is shown on both the 1936 and 1941 maps of the area. The house was removed prior to 1964, when the USGS map was produced.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey, mapping, and the excavation of two shovel tests. The total site area is 3,600 m² based on sheet refuse distribution and visible features. The site consists of structural remains and an artifact surface scatter (see Figure 8-107).

Features noted during pedestrian survey include a machine-made brick cistern located near the west-central portion of the site, and a recent wooden post corral consisting of barbed wire, wood planks, and sheet metal located near the site's southern boundary. Wooden support posts present in the northern portion of the site suggest the presence of a structure measuring 14-15 m on a single side. A low circular mound containing machine-made bricks is present within the modern corral. It is 5 m in diameter and appears to represent remains of the molasses processing oven.

The artifact assemblage recovered from the ground surface at 41DT192 consists of seven items: two refined earthenwares, two stonewares, one table glass fragment, one wire nail, and one ceramic door knob. The two refined earthenwares are twentieth century porcelains or "cafeteria ware." The stonewares date ca. 1890-1930. The site's artifacts and features suggest that the site represents turn of the century to mid-twentieth century occupations related to former property owner John Derrick, who manufactured molasses syrup (see Archival Information).

Recommendations

Although occupation of the site dates from the early to mid-twentieth century, it is unique for the project area and can provide information on the

socioeconomic status of rural ethnic groups. Rural cottage industry sites are poorly documented in this area. The possible remains of the oven are unusual and may merit further work at the site. The site is thought to be potentially eligible (Category II) for nomination to the National Register. Further evaluations are recommended; however, it must be pointed out that serial occupations and erosion may reduce the site's research potential and historical significance.

Site 41DT193

The newly recorded historic site (Figure 8-108) is located in an upland pasture ca. 600 m (1,968 ft) north of Doctors Creek and 2.4 km (1.5 mi) southwest of Cooper. The site is bisected by FM 1528. Site elevation is 139.6 m (458 ft) above msl, and the mapped soil type is Wilson silt loam. In its native state, this area was an upland prairie.

Stratigraphy

Three natural soil strata were identified at site 41DT193. These strata are discussed in order from the oldest (lowest) to youngest (uppermost).

Stratum I consists of the C soil horizon. It is a gray (10YR6/1) clay with light brownish gray (10YR6/2) and strong brown (7.5YR5/8) mottles. It has a gradual wavy upper boundary at 110 cm below surface and was excavated to a maximum depth of 190 cm below surface (BHT 150, excavated on the same landform). Stratum I is culturally sterile.

Stratum II consists of several B soil horizons (B21 to B3), but in the backhoe investigations these horizons were classified as comprising a single stratum. It is a gray (10YR6/1) clay with a gradual upper boundary at 35 cm below surface. Stratum II is culturally sterile.

Stratum III is a grayish brown (10YR5/2) clay loam. All cultural materials from the site were derived from this stratum. This stratum has been truncated in portions of the site area by erosion, but is continuous across the site locus.

Archival Information

Informant interviews with Ina Blount and Mr. Henderson indicated that a blacksmith shop and

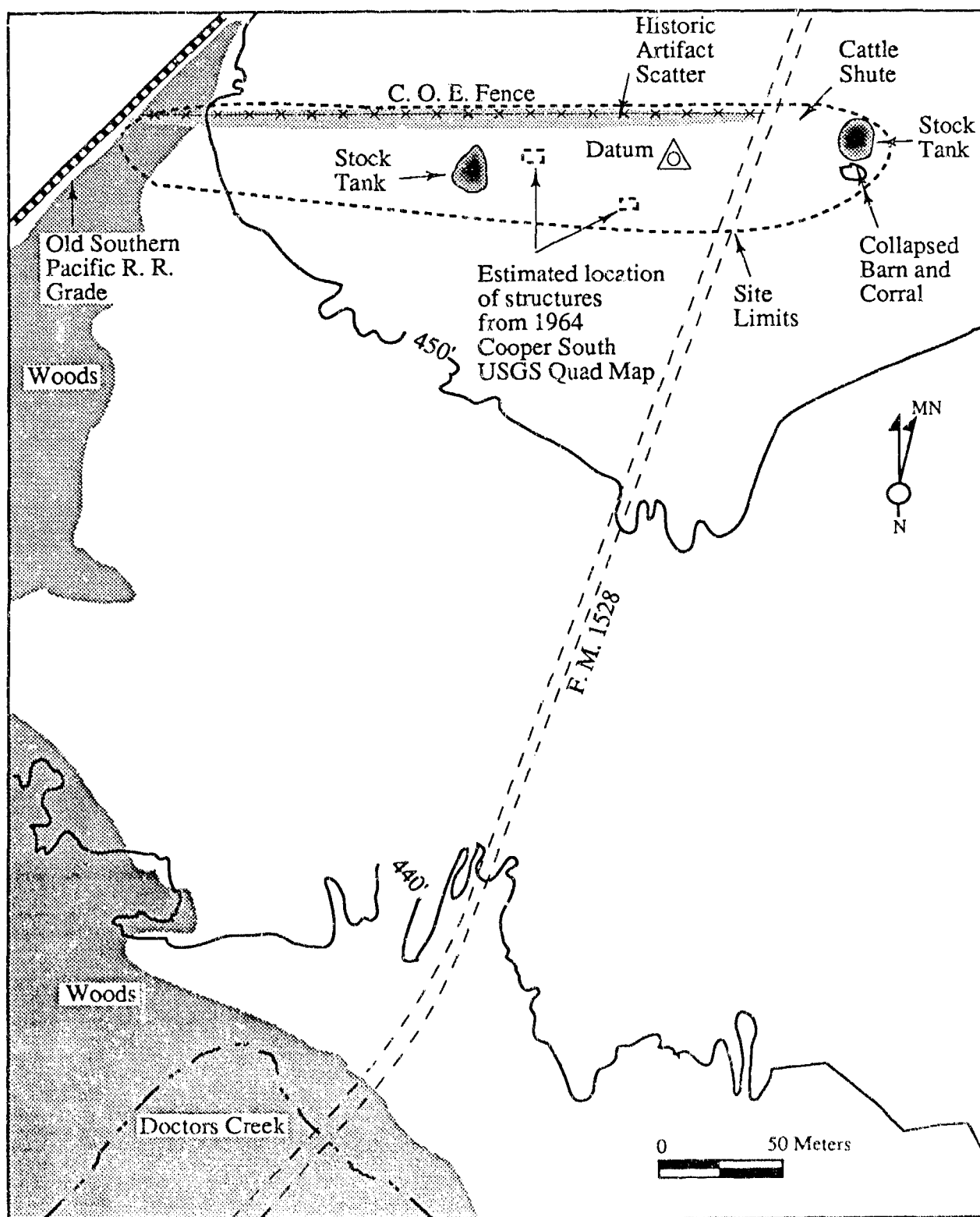


Figure 8-108. Plan of site 41DT193, showing locations of site limits (as defined by surface artifacts), surface features, and land disturbances.

house were present at the site. William Henderson was the blacksmith who occupied the site. No structures are shown at this location on the 1936 or 1941 maps of the area. On the 1964 USGS quadrangle map, a structure is shown at this location.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and mapping. The total site area is 18,000 m² (4.4 acres), based on the scatter of sheet refuse and distribution of ranching facilities. In the western portion of the site, a surface scatter of charcoal and ash is present in an eroded area. This is thought to have been the location of the blacksmith shop. This portion of the site appears to have been bulldozed. A stock tank is located west of the area. In the eastern portion of the site, the remains of a barn, a corral, and livestock chute are present. A stock tank is also present in this portion of the site.

The artifact assemblage recovered from the ground surface at 41DT193 consists of 13 items: five refined earthenwares, two stonewares, one bottle glass fragment, two pieces of table glass, one window glass fragment, one machine-made brick, and one milk glass (Mason) canning lid. A hammered iron stock and a handmade iron fireplace shovel were also noted but not collected.

One floral decalcomania ceramic dates ca. 1895–1950. The brown stonewares date between 1890 and 1930. A single manganese solarized table glass (bowl cover) dates 1880–1920.

Recommendations

The site is thought to have been occupied from the late nineteenth to early twentieth centuries. Recent activities at the site have destroyed the site's integrity. Bulldozing, stock pond construction, and disturbance from highway construction have affected the site. This site is clearly not eligible (Category III) for the National Register due to extensive disturbance and its low potential to yield information important to history. If future information is found that warrants additional consideration, this site will be

reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT194

This newly recorded historic site (Figure 8-109) is situated on low ground at the southeast corner of three stock tanks. Cannon Creek lies 625 m (2,050 ft) to the east and Doctors Creek lies 700 m (2,296 ft) to the west. The site is on the west side of FM 1880, 3.4 km (2.1 mi) south of Cooper. Site 41DT148 is located 600 m (1,968 ft) to the south. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Wilson silt loam. The site setting is a floodplain/slope.

Stratigraphy

Three natural soil strata were identified at site 41DT194. These strata are discussed in order from the oldest (lowest) to youngest (uppermost). Stratum I consists of the C soil horizon which is deep, loamy, and ancient (perhaps Pleistocene) alluvium. Stratum I is a gray (10YR6/1) clay with light brownish gray (10YR6/2) and strong brown (7.5YR5/8) mottles. It has a gradual wavy boundary at 1.1 m below surface and was excavated to a maximum depth of 1.9 m below ground surface. It is culturally sterile.

Stratum II consists of several B soil horizons, but was described as a single stratum in the backhoe investigations. It is a gray (10YR6/1) clay with a gradual upper boundary at 35 cm below ground surface. It is culturally sterile.

Stratum III is a grayish brown (10YR5/2) clay loam. All cultural materials are assumed to be from this stratum.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and mapping. The total site area is 1,200 m², based upon the presence of surface features and ranching facilities (see Figure 8-109). The features consist of two machine-made brick cisterns or wells 14 m apart. One of the cisterns is circular, measuring 90 cm in diameter, and is composed of machine-made Texas and Palmer brick. The second cistern is

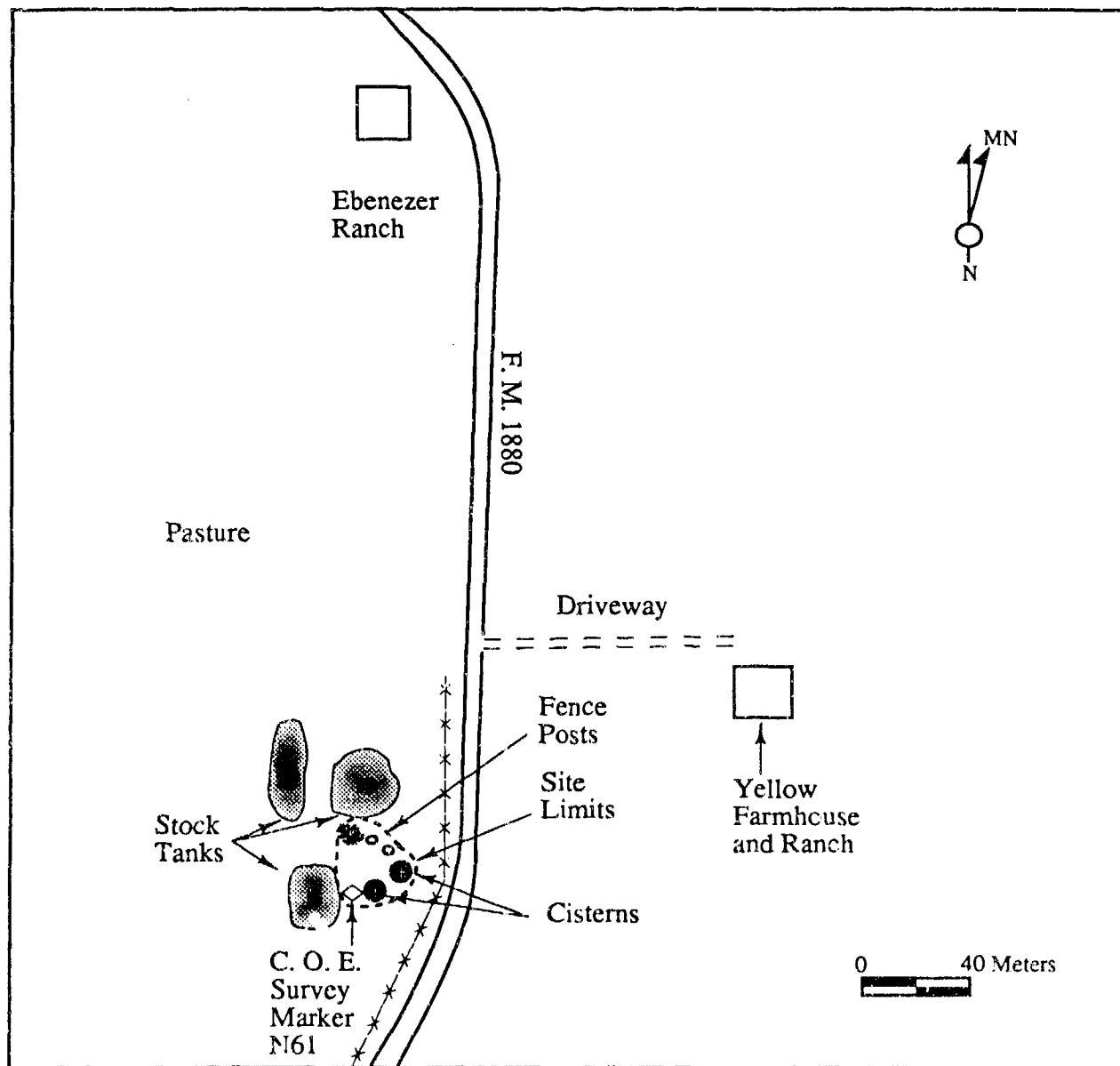


Figure 8-109. Plan of site 41DT194, showing locations of site limits (as defined by surface artifacts), surface features, and land disturbances.

square (1.1 m x 1.1 m) and is composed of Ferris brick. It is located 14 m southwest of the circular cistern. The survey of the site did not reveal any additional features. Only modern roadside litter is present at the site, and no artifacts were collected. Three large stock ponds have been constructed north and west of the site, and are thought to have altered the site's integrity. If other structures were present, they appear to have been bulldozed, possibly during construction of the nearby stock tanks.

Recommendations

The site's aboveground features appear to indicate that the site was occupied during the early twentieth century but has been essentially destroyed by stock pond construction. It is clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT195

This newly recorded historic site (Figure 8-110) is located in pasture on the Doctors Creek floodplain. Doctors Creek lies 200 m (656 ft) west of the site. The site lies at the western end of a pasture road, 425 m (1,394 ft) west of FM 1880 and 3.6 km (2.2 mi) south-southwest of Cooper. Elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Wilson silt loam.

In its native state, this area was an upland prairie. The site has been intensively cultivated and is in a fallow pasture today.

Stratigraphy

Two natural soil strata were identified at site 41DT192. These strata are discussed in order from the older (lower) to younger (upper). Stratum I is a very dark gray (10YR3/1) clay. It has a diffuse upper boundary at 70 cm below surface and was excavated to a maximum depth of 150 cm below ground surface. It is culturally sterile.

Stratum II is a very dark gray (10YR3/1) clay with gray (10YR6/1) mottles. The upper 25 cm of this surface soil horizon is a plow zone. All recovered cultural materials derive from stratum.

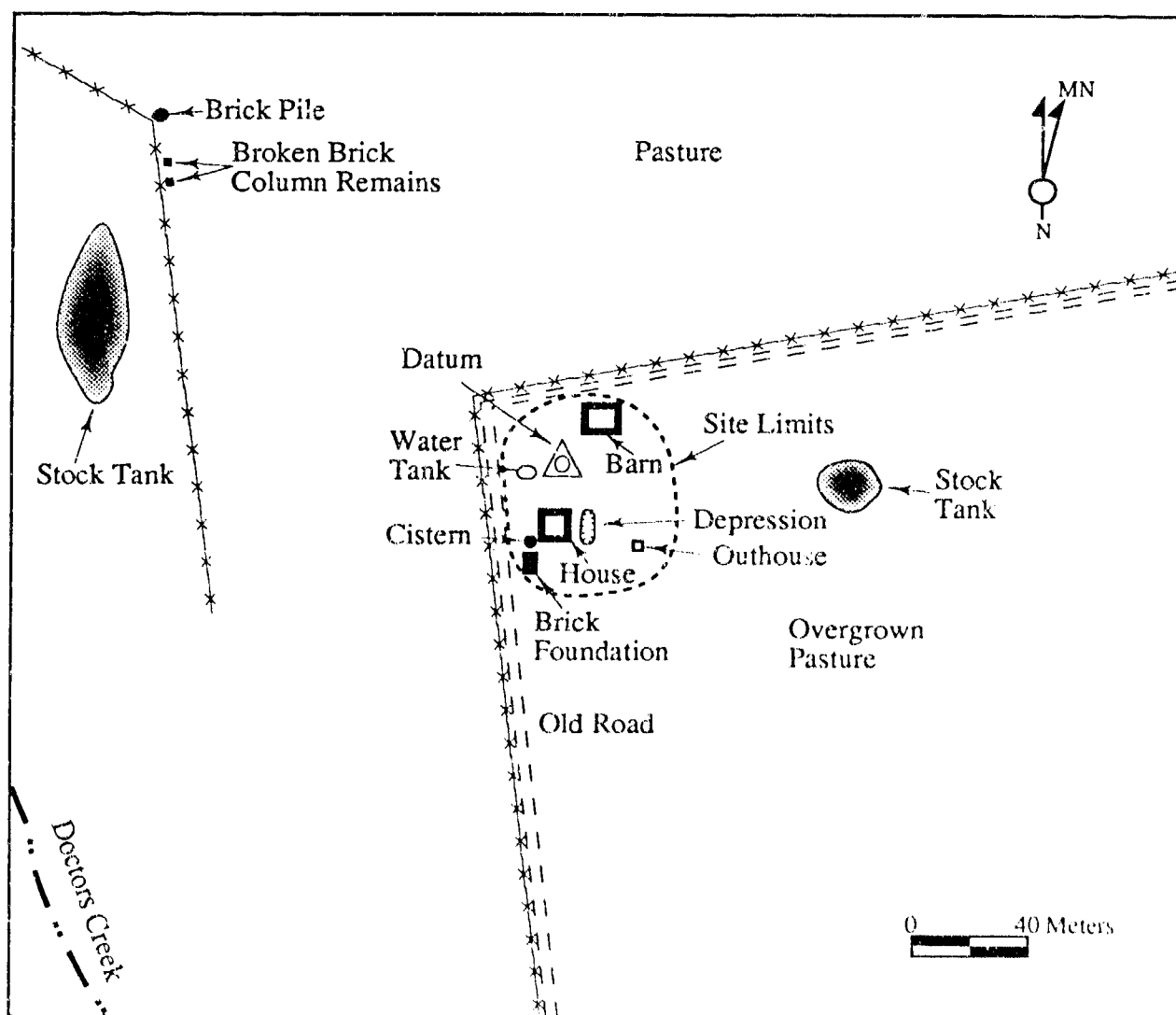


Figure 8-110. Plan of site 41DT195, showing locations of site datum and site limits as defined by surface artifacts and features.

Archival Information

No earlier maps show a structure at this location. A structure is shown at this location on the 1964 topographic map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and mapping. A single shovel test (35 cm x 35 cm x 35 cm) was excavated for the permanent datum. No artifacts were recovered from this unit.

The total site area is 4,800 m². A series of features and a scatter of historic artifacts were noted during pedestrian survey. A stock pond is present on the east side of the site (see Figure 8-110). A modern barn is located on the northern portion of the site. Thirty meters to the south, the collapsed remains of a wooden frame house are present. The house has both cut and wire nails and a collapsed machine-made brick chimney. A collapsed machine-made brick cistern is located near the southwest corner of the house. The remains of a rectangular brick feature are located 15 m south-southwest of the house. Its function is unknown. A rectangular depression, possibly a storm cellar, is located 8 m east of the house. A concrete outhouse foundation is present 20 m east of this feature.

The artifact assemblage recovered from the ground surface at 41DT195 consists of seven items, including one refined earthenware, two bottle glass fragments, one table glass fragment, and three cut nails. The blue-tinted ironstone dates between 1840 and 1910. One clear condiment bottle (pickle?) has an "Owens Illinois" maker's mark and dates ca. 1929-1954.

Recommendations

The occupation dates from the late nineteenth to the mid-twentieth centuries. Although cut nails were noted in the structural ruins, the building could contain recycled older elements, or could have been moved onto its present site. Later occupation at the site has severely altered the earlier component, thus diminishing the site's potential to address the settlement and material

culture questions outlined in the Research Design. The site is considered clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT196

This newly recorded historic site (see Figure 8-64) is located on Doctors Creek at the low or slope floodplain interface in a pasture. Doctors Creek is 300 m (984 ft) north of the site. The site is 150 m (492 ft) west of the Old Liberty Grove Cemetery and 50 m (164 ft) west of FM 1880, near that road's intersection with a west-trending dirt road. Elevation at the site is 132.6 m (435 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this was a post oak slope forest with a post oak savannah and upland prairies to the west and floodplain forest to the northeast.

Stratigraphy

Five natural soil strata were identified during backhoe trench investigations and survey for the landform containing site 41DT196. These strata are discussed in order from the oldest (lowest) to youngest (uppermost).

Stratum I is a light gray (10YR7/1) clay with dark grayish brown (10YR4/2) and strong brown (7.5YR5/8) mottles. It has a gradual upper boundary at 1.2 m below surface and was excavated to a maximum depth of 1.6 m below ground surface. It is culturally sterile.

Stratum II is a dark grayish brown (10YR4/2) clay with yellowish brown (2.5Y6/4), light gray (10YR7/1), and a yellowish red (5YR5/8) mottles. It has a gradual upper boundary at 50 cm below ground surface. Stratum II is culturally sterile.

Stratum III is a light gray (10YR7/1) silt loam. It has a wavy upper boundary at 40 cm below surface. Stratum III is culturally sterile.

Stratum IV is a dark grayish brown (10YR4/2) silt loam. It has a diffuse upper boundary at 30 cm below ground surface. Stratum IV is culturally sterile.

Stratum V is a light gray (10YR7/1) silt loam

with very dark grayish brown (10YR3/2) mottles. This is the surface soil horizon (Ap) at the site. All cultural materials derive from this stratum.

Archival Information

Site 41DT196 (along with 41DT197) is located on one of the R. D. Spain surveys. These tracts were granted to the heirs of R. D. Spain for his service and death with Grant and Johnson in the Texas War for Independence (Miller 1967:609-610). Two surveys (80.9 ha [200 acres] and 76.9 ha [190 acres]) were patented in 1866. Two additional surveys (64.8 ha [160 acres] each) were patented on 1 March 1867 and 21 May 1870. The tract containing 41DT196 (and 41DT197) is the 76.9 ha (190 acre) grant given in 1866. Based on the multiple grants, it is unlikely that any of the Spain heirs actually lived on this tract.

In 1936, this R. D. Spain survey was split between a 19.8 ha (49 acre) tract belonging to Mrs. S. E. Stevenson (north of road) and a 26.3 ha (65 acre) tract belonging to C. C. Taylor (south of road). Mrs. S. E. Stevenson rented the tract containing site 41DT196 to tenants. She obtained this land in 1894 (Delta County Deed Book U: 52). In 1936, a 28 ft x 22 ft, single-story, three-room dwelling; a shed; and a barn were present. At that time 13.4 ha (33 acres) were in pasture, 3.2 ha (8 acres) were in cultivation (cotton), 2.8 ha (7 acres) were wasteland, and 0.4 ha (1 acre) was reserved for the home. In all 12.1 ha (30 acres) needed terracing, due to extensive erosion.

According to the U.S.G.S. Cooper South 7.5' Quadrangle map (1964), a barn or corral was located at this site. The sheet metal and board scatter at the site indicate that a structure was present. The cistern suggests that the site may have been a house site. In addition, a sketch map from the 1970 Cooper survey (site 41DT56) indicates that an abandoned school house was present at the site. The 1941 Hopkins and Delta counties road map also shows a school house at this location.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included

close interval (5 m) pedestrian survey and mapping. A single shovel test (35 cm x 35 cm x 20 cm) was excavated. This culturally sterile unit was subsequently used for the permanent datum.

The site consists of a cistern and artifact scatter noted during pedestrian survey. The total site area is 2,400 m² (see Figure 8-64). The cistern is circular, 1.8 m in diameter, and lined with machine-made GROESBECK brick. The cistern lies on the eastern portion of the site, 29 m north of the road and 50 m west of FM 1880. Sheet metal and boards are scattered at the site, but cannot be related to any features.

Three items were collected from the brick cistern: one clear pepsin Illinois bottle fragment and two window glass fragments. All remains date to the first half of the twentieth century.

Recommendations

The site was used from the late nineteenth until the mid-twentieth centuries. Former structures at the site have probably been bulldozed. Based on the impacts to the site, the integrity is poor. The site is judged to be clearly not eligible (Category III) for the National Register. Although tenants occupied the site and a 1940s school may have been located here, this historic context is not judged to be locally or regionally significant. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT197

This newly recorded historic site (see Figure 8-64) is located in pasture on top of a rise at the 135.6 m (445 ft) contour. Doctors Creek flows 600 m (1,968 ft) east of the site. The site is 225 m (738 ft) west of FM 1880 on the south side of a dirt road, and 3.4 km (2.1 mi) south of Cooper. Site 41DT56 is located 100 m (328 ft) to the east. The site lies on Crockett loam soil.

In its native state, this area was a post oak savannah with an upland prairie to the west. The site has been cleared and intensively cultivated in the past. At the time of the present survey the site area was in fallow pasture.

Stratigraphy

Five natural soil strata were identified during backhoe trench investigations and survey for the landform containing site 41DT197. These strata are discussed in order from the oldest (lowest) to youngest (uppermost).

Stratum I is a light gray (10YR7/1) clay with dark grayish brown (10YR4/2) and strong brown (7.5YR5/8) mottles. It has a gradual upper boundary at 1.2 m below surface and was excavated to a maximum depth of 1.6 m below ground surface. It is culturally sterile.

Stratum II is a dark grayish brown (10YR4/2) clay with yellowish brown (2.5Y6/4), light gray (10YR7/1), and a yellowish red (5YR5/8) mottles. It has a gradual upper boundary at 50 cm below ground surface. Stratum II is culturally sterile.

Stratum III is a light gray (10YR7/1) silt loam. It has an abrupt wavy upper boundary at 40 cm below surface. Stratum III is culturally sterile.

Stratum IV is a dark grayish brown (10YR4/2) silt loam. It has a diffuse upper boundary at 30 cm below ground surface. Stratum IV is culturally sterile.

Stratum V is a light gray (10YR7/1) silt loam with very dark grayish brown (10YR3/2) mottles. This is the surface soil horizon (Ap) at the site. All cultural materials are derived from this stratum.

Archival Information

Site 41DT197 (along with 41DT196) is located on one of the R. D. Spain surveys. These tracts were granted to the heirs of R. D. Spain for his service and death with Grant and Johnson in the Texas War for Independence (Miller 1967:609-610). Two surveys (80.9 ha [200 acres] and 76.9 ha [190 acres]) were patented in 1866. Two additional surveys (64.8 ha [160 acres] each) were patented on 1 March 1867 and 21 May 1870. The tract containing 41DT197 (and 41DT196) is the 76.9 ha (190 acre) grant given in 1866. Based on the multiple grants, it is unlikely that any of the Spain heirs actually lived on this tract.

In 1936, the tract containing site 41DT197 belonged to Mr. C. C. Taylor, who leased the farm to tenants. He obtained the property in 1901 (Delta County Deed Book 3:629). At that time, a

32 ft x 36 ft, single-story, four-room dwelling; a 16 ft x 30 ft shed; and a 30 ft x 40 ft barn were present. Part of Taylor's tract extended outside the R. D. Spain Survey. In 1936, all 25.9 ha (64 acres) were in cultivation (22.3 ha [55 acres] in cotton and 3.6 ha [9 acres] in corn), and 0.4 ha (1 acre) was reserved for the home.

This site represents a recent historic house site, not one of those mentioned in the 1936 WPA survey. The house was occupied in 1970 according to the 41DT56 site form at TARL dated 1970. The house also appears on the U.S.G.S. Cooper South 7.5' Quadrangle map (1964), but no outbuildings are shown.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included close interval (5 m) pedestrian survey and mapping. A single shovel test (35 cm x 35 cm x 20 cm) was excavated near the telephone pole on the site. This culturally sterile unit was subsequently used for the permanent datum.

The site consists of a collapsed house and artifact scatter noted during pedestrian survey. The total site area is 1,600 m². Features noted during survey include a collapsed house composed of wooden posts and planks with wire nails, and a roughly rectangular shallow depression containing wooden posts and beams which may be the remains of a storm shelter (see Figure 8-64). A circular shallow depression measuring 2 m in diameter on the east side of the house probably represents a cistern. The top portion of the cistern is toppled over and is composed of Ferris brick. Brick, asphalt roof shingles, and wood planks were scattered across the site. One brick has an impressed star maker's mark. An old clothes dryer is located 18 m east of the house. All material culture items appeared to be less than 50 years old, and no collections were made at the site.

Recommendations

Occupation of the site is thought to date from the mid- to late twentieth century. This site has low potential to address the research questions outlined in the Research Design and appears to be less than 50 years old. The site is judged to be

clearly not eligible (Category III) for the National Register because it fails to meet the criteria of significance. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT198

This newly recorded historic site (Figure 8-111) is situated in an upland pasture at a sharp turn on the dirt road that leads west from FM 1880. Site elevation ranges between 137 m (450 ft) and 138 m (452 ft) above msl. Doctors Creek flows 650 m (2,132 ft) east of the site. The site is 4.1 km (2.5 mi) southwest of Cooper. The mapped soil type is Crockett loam. In its native state,

this area was a post oak savannah with an upland prairie to the west.

Stratigraphy

Four natural soil strata were identified adjacent to site 41DT198 during deep testing (see Chapter 6). They are discussed from oldest (lowest) to youngest (uppermost).

Stratum I is a dark gray (10YR4/1) clay with red (2.5YR4/8) mottles. It has a gradual upper boundary at 65 cm below surface and was excavated (i.e., in BHT 161) to a maximum depth of 75 cm below ground surface. It is culturally sterile.

Stratum II is a light gray (10YR7/1) silt loam. It has a diffuse upper boundary at 25 cm

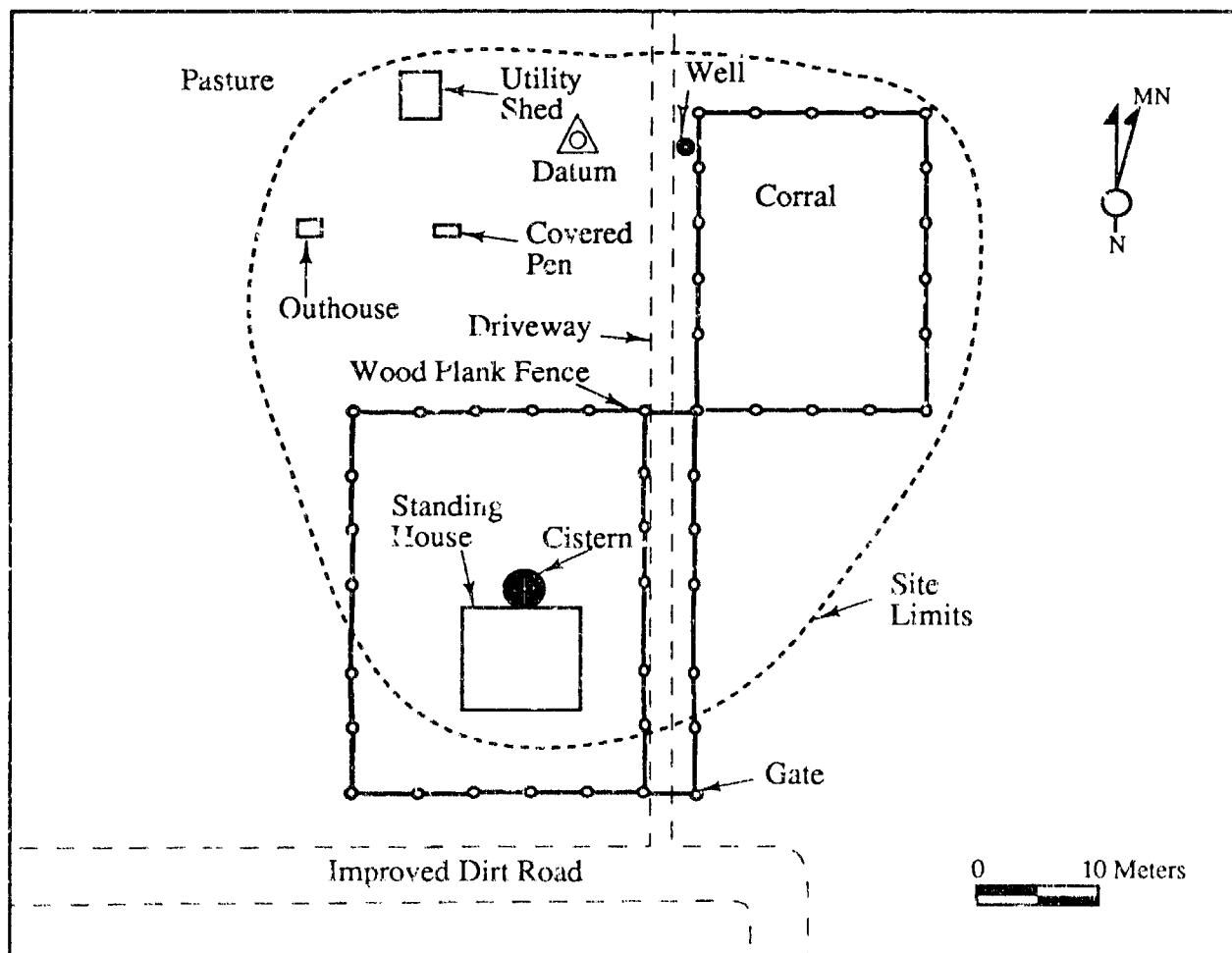


Figure 8-111. Plan of site 41DT198, showing locations of site datum, site limits (as defined by surface artifacts and features), and land disturbances.

below ground surface. Stratum II is culturally sterile.

Stratum III is a light brownish gray (10YR4/2) silt loam. It is the lower part of an A soil horizon.

Stratum IV is the surface soil horizon. It is a light brownish gray (10YR6/2) silt.

Archival Information

Site 41DT198 is located on the Henry Sissel (A-330) Survey. Two house sites were shown at this location on the 1941 Delta and Hopkins counties highway maps. A house and barn were shown at this location on the 1964 USGS map. These structures were still standing in 1975 when the U.S. Department of Agriculture conducted aerial surveys.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. The sole prehistoric artifact from the site is an isolated surface find (a Gary dart point; Figure 8-112).

The more-extensive historic component at the site is a relatively recent ranch. The CE boundary fence cuts between the corral and the house. The house is located on private land. Within CE property, the site covers a 12,000 m² area. A modern corral is located in the northeast corner of the site, and a cistern lined with machine-made brick is situated at the northwest corner of the corral (see Figure 8-111). A small, plank shed is located 40 m west of the cistern. A small outbuilding constructed of corrugated sheet metal and wooden planks is situated 20 m to the south. A standing outhouse is located 20 m west of this structure. Since all material remains were less than 50 years old, no artifacts were collected at the site.

Recommendations

With the exception of the isolated prehistoric artifact find, the site dates to the mid-twentieth

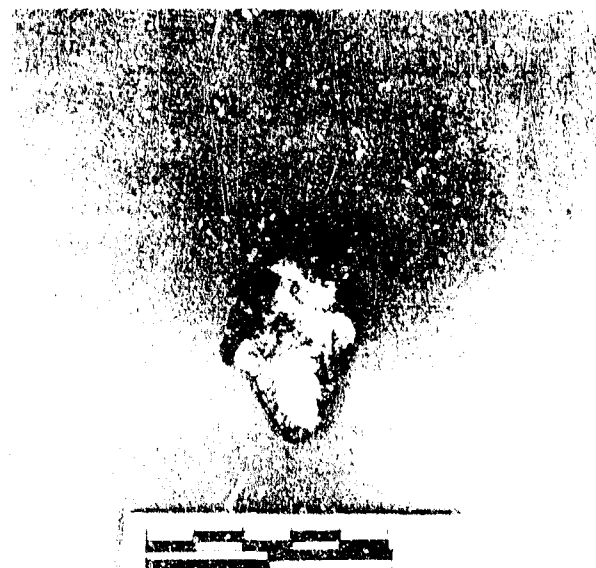


Figure 8-112. Projectile point from site 41DT198, Delivery Order Number 7 study area: Gary dart point (surface).

century. Archaeological, archival, and informant researches all indicate that there is no historical significance to this site. Site 41DT198 is considered clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT199

This newly recorded historic site (Figure 8-113) is located in a slope setting within an overgrown pasture 650 m (2,132 ft) south of the FM 1880 crossing of Doctors Creek. The site is located 150 m (492 ft) east of the intersection of FM 1880 and an unnamed dirt road, and 3.84 km (2.4 mi) south of Cooper.

Elevation at the site varies between 137 m (450 ft) and 138 m (454 ft) above msl. The mapped soil for the site is Wilson silt loam. In its native state, this area was an upland prairie.

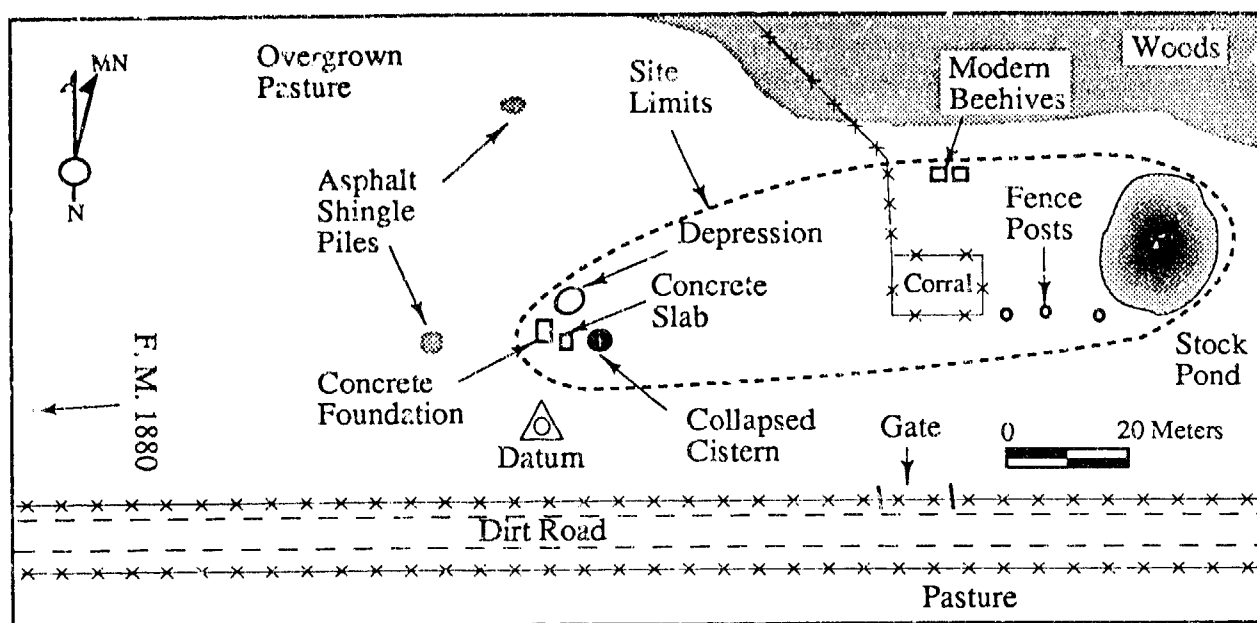


Figure 8-113. Plan of site 41DT199, showing locations of site limits (as defined by surface artifacts and features) and land disturbances.

Stratigraphy

Five natural soil strata were identified during backhoe trench investigations (i.e., BHT 160) of the landform containing site 41DT199. These strata are described from oldest (lowest) to youngest (uppermost).

Stratum I is a light gray (10YR7/1) clay with dark gray grayish brown (10YR4/2) and strong brown (7.5YR5/8) mottles. The upper boundary is gradual and occurs 120 cm below ground surface. Stratum I was excavated to a maximum depth of 160 cm below ground surface in BHT 160.

Stratum II is a dark grayish brown (10YR4/2) clay loam with light reddish brown (10YR6/2) and yellowish red (5YR5/8) mottles. It has a gradual upper boundary at 50 cm below surface.

Stratum III is a light gray (10YR7/1) clay silt loam. It has a gradual upper boundary at 40 cm below ground surface.

Stratum IV is the lower A soil horizon. It is a dark grayish brown (10YR4/2) clay silt loam, with an upper boundary at 30 cm below ground surface.

Stratum V, the surface soil horizon, is the modern plow zone. It is a light gray (10YR7/1) clay silt loam with very dark grayish brown mottles.

Archival Information

A structure is shown at the site on the 1941 highway map of this area. The U.S.G.S. Cooper South 7.5' Quadrangle map (1964) shows a house, barn, corral, and stock tank at this site location. The concrete foundation is likely the remnant of the house. An asphalt shingle pile is at the approximate location of the barn. The site is part of the Liberty Grove Community.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. The site area is 5,400 m² (58,126 ft²) based upon the distribution of surface artifacts and features. Features present include a rectangular concrete foundation measuring 1.85 m x 2.35 m, which is possibly a pump house. A collapsed brick (machine-made) cistern is located 6 m east of this feature (see Figure 8-113). A small circular depression measuring 1 m in diameter is located 5 m north of the well and concrete foundation. A corral and stock pond are located 90 m east of the

features, and appear to be recent. Recent refuse litters the site, since it and the adjacent roadway have become dumping areas.

Selected surface collection of temporally diagnostic items yielded one stoneware fragment and one cobalt glass fragment dating to the twentieth century. The brown-glazed stoneware dates ca. 1890-1930. The single bottle glass fragment is made by an automated bottling machine and dates from 1910 to the present.

Recommendations

The occupation of the site dates from the early to mid-twentieth century. Due to the recent occupation and refuse dumping, the site has low potential to address the chronological research questions outlined in the Research Design. The site is judged to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT200

This newly recorded historic site (Figure 8-114) is located in upland pasture at 134 m (440 ft) above msl elevation. Doctors Creek lies 400 m (1,312 ft) to the north. The site lies 500 m (1,640 ft) east of the intersection of FM 1880 and an unnamed dirt road, 3.88 km (2.4 mi) south of Cooper. The mapped soil type at the site is Wilson silt loam. In its native state, this was a post oak savannah with an upland prairie to the south.

Stratigraphy

Five natural soil strata were identified during backhoe trench investigations (i.e., BHT 159) of the landform containing site 41DT200. These strata are described from oldest (lowest) to youngest (uppermost).

Stratum I is a light gray (10YR7/1) clay with dark grayish brown (10YR4/2) and strong brown (7.5YR5/8) mottles. The upper boundary is gradual and occurs at an average depth of 120 cm below ground surface.

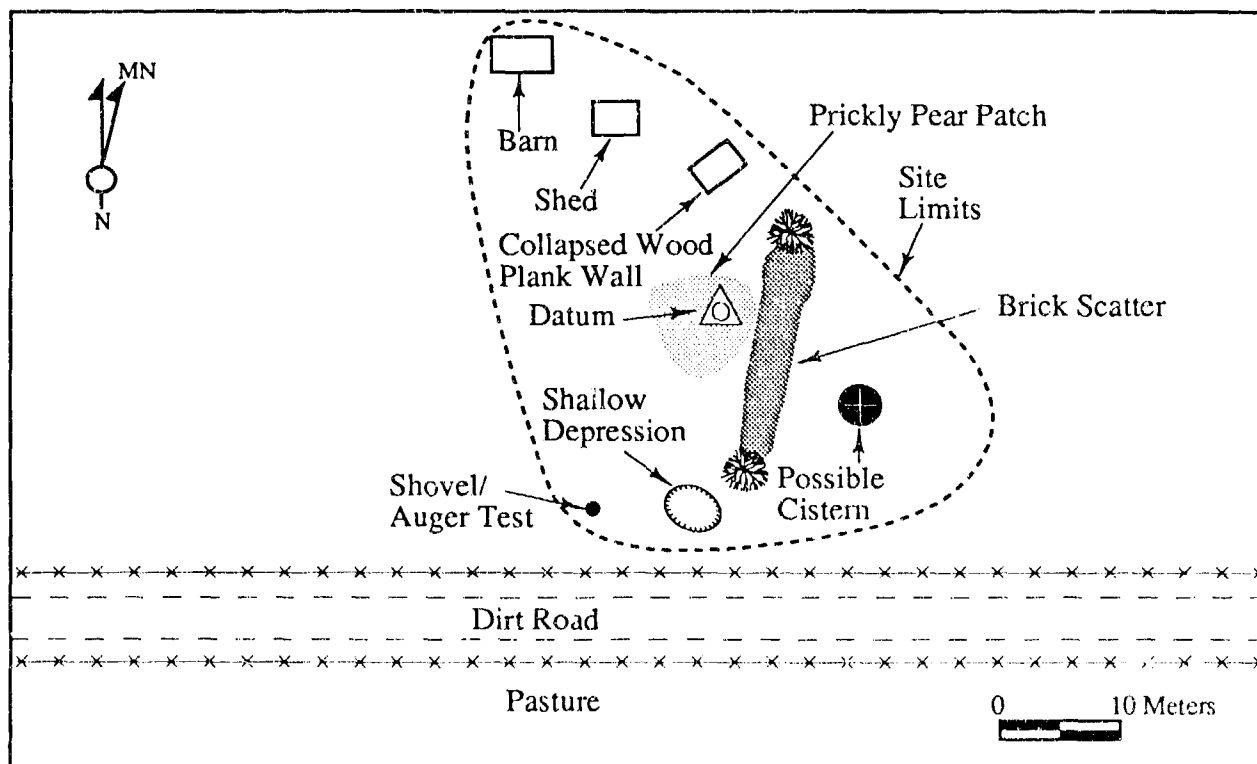


Figure 8-114. Plan of site 41DT200, showing locations of shovel/auger test, site limits (as defined by surface artifacts and features), and land disturbances.

Stratum II is a dark grayish brown (10YR4/2) clay with light yellowish brown (2.5Y6/4) and yellowish red (5YR5/8) mottles. It has a gradual upper boundary at 50 cm below surface.

Stratum III is a light gray (10YR7/1) clay silt loam. It has a gradual upper boundary at 40 cm below ground surface.

Stratum IV is the lower A soil horizon. It is a dark grayish brown (10YR4/2) clay silt loam, with an upper boundary at 30 cm below ground surface.

Stratum V, the surface soil horizon, is the modern plow zone. It is a light gray (10YR7/1) clay silt loam with very dark grayish brown (10YR3/1) mottles.

Archival Information

No structures are shown at this location on the 1936 or 1941 maps. The U.S.G.S. Cooper South 7.5' Quadrangle map (1964) indicates a barn at this location. The site is part of the Liberty Grove community. Interviews with long-term residents of the area did not yield information on previous occupants of the site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The total site area is 1,440 m², based on the location of features. Two standing structures are present at the site. A standing barn is located in the northern part of the site (see Figure 8-114) and has sheet metal nailed to wooden posts. A smaller barn or shed is located 5 m southeast of this structure and is of similar construction.

Two depressions in the ground surface are located 30 m south of this structure. These are thought to be either cisterns or storm cellars. A scatter of machine-made brick is also located in this portion of the site.

All structures appear to date from the mid-twentieth century (ca. 1940) to the present.

Recommendations

The presence of the machine-made brick scatter and the collapsed cistern, as well as informant interviews, suggest a house was present at 41DT200. Occupation of the site is thought to date through the early to mid-twentieth century. Due to the recent nature of the occupation, the site is judged to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT201

This newly recorded historic site (Figure 8-115) is located in upland pasture at 134 m (440 ft) above msl elevation. Doctors Creek lies 250 m (820 ft) to the north. The site lies 1.325 km (0.82 mi) east of the intersection of FM 1880 and an unnamed dirt road, 3.92 km (2.43 mi) south of Cooper. The mapped soil type is Crockett loam. In its native state, this area was a post oak savannah with an upland prairie to the south, and a floodplain forest to the north.

Stratigraphy

Two natural soil strata were identified at site 41DT201. These strata are discussed in order from the older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt wavy boundary at 20 cm below ground surface. It was excavated to a maximum depth of 40 cm below ground surface. Stratum I is culturally sterile.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. All cultural materials at site 41DT201 are derived from this stratum.

Archival Information

Mr. John Banks of Cooper reports (3 April 1989) that this was the farmstead of Walker

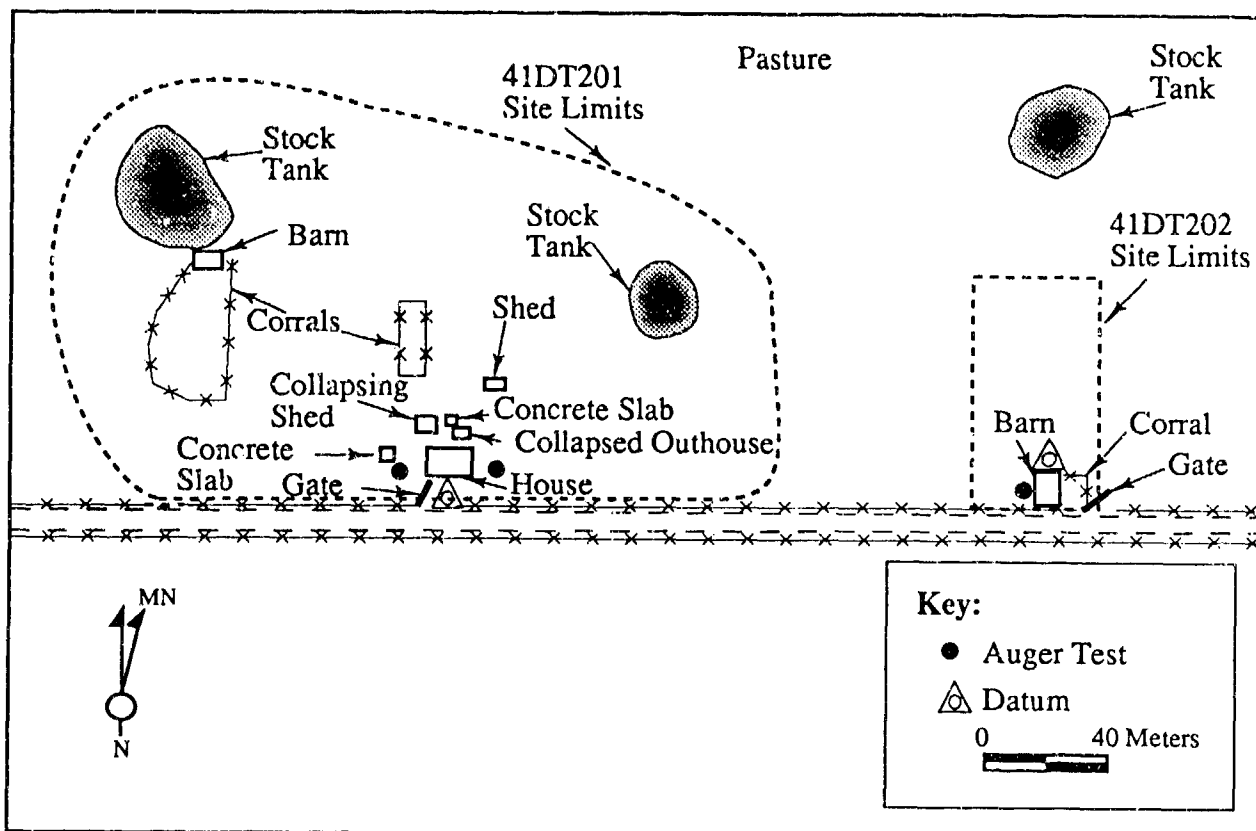


Figure 8-115. Plan of sites 41DT201 and 41DT202, showing locations of site limits (as defined by surface artifacts and features), site datum excavations, auger tests, and land disturbances.

Anderson, who made the concrete blocks for the house and was renowned for his frugality and construction expertise. All of the structures visible at the site appear to date to the same time period. A structure is shown at this location on the 1941 map. The U.S.G.S. Cooper South 7.5' Quadrangle map (1964) shows two houses, two corrals, one barn, and two stock tanks at this location. Walker Anderson was murdered at the farmstead in 1932 and hanged in the barn, which was then burned.

Site 41DT201 (and 41DT202) is located on the E. R. Crowder Survey (A-72), near the southeast corner of the 35.6 ha (88 acre) tract inherited by E. S. Anderson from Walker Anderson on 5 December 1933 (Delta County Deed Book 70: 269). E. S. Anderson was a resident on the farm when it was surveyed by the WPA in 1936.

None of the buildings and their dimensions mentioned in 1936 correspond to the aboveground features and foundations noted at site 41DT201.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey and shovel tests. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The total site area is 16,000 m² (4 acres), including all ranching facilities. This site consists of a series of standing structures and two stock tanks. Visible features at the site include a standing concrete block one-story house with roof, windows, and interior trim removed; a collapsed concrete block storage shed; a collapsed concrete outhouse or cistern; a standing concrete block storage shed with roof and windows removed; a standing corral composed of wooden posts, planks, and wire fencing; a partially standing upright wooden post corral with barbed wire; the remains of a dismantled barn with upright wooden posts

and planks; and two stock tanks (see Figure 8-115). A "New Method" stove, modern trash, and corrugated sheet metal are in and around the barn. No ceramic or glass artifacts were identified. Since all material remains were less than 50 years old, no collections were made at the site.

Site 41DT201 was revisited in the summer of 1990, and two auger tests were made to determine soil strata and depth of deposit. Vessel glass (1910-present) was recovered 0-10 cm below ground surface, west of the house.

Recommendations

The site and structures have been thoroughly stripped of all reusable materials. The site is known to have been occupied during the mid-twentieth century and was reused after Walker Anderson's death. Due to the recent occupation and disruption, the site is judged to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT202

This newly recorded historic site (see Figure 8-115) covers 3,200 m² (34,444.8 ft²) and is located in upland pasture at 134 m (440 ft) above msl elevation. Doctors Creek flows 325 m (1,066 ft) to the north. The confluence of Doctors Creek and Cannon Creek lies 500 m (1,640 ft) north-northeast of the site. The site is 1.5 km (0.9 mi) east of the intersection of FM 1880 and an unnamed dirt road, 3.7 km (2.3 mi) south of Cooper. The mapped soil type is Crockett loam. In its native state, this area was a post oak savannah with an upland prairie to the south and a floodplain to the North.

Stratigraphy

Two natural soil strata were identified at site 41DT202. These strata are discussed in order from the older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt wavy boundary at 20 cm below ground surface. It was excavated to a

maximum depth of 40 cm below ground surface. Stratum I is culturally sterile.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. All cultural materials at site 41DT202 are derived from this stratum.

Archival Information

Mr. John Banks of Cooper reports (3 April 1989) that this site was part of the farmstead of Walker Anderson who was murdered at his farmstead (i.e., site 41DT201; see above) in 1932. Site 41DT202 was a remote barn, which postdates Anderson's occupation and was used by various tenants until the mid-1970s. Site 41DT202 (like site 41DT201) is located on the E. R. Crowder Survey (A-71), near the southeast corner of the 35.6 ha (88-acre) tract inherited by E. S. Anderson from Walker Anderson on 5 December 1933 (Delta County Deed Book 70: 269). E. S. Anderson was a resident on the farm when it was surveyed by the WPA in 1936. None of the buildings and their dimensions mentioned in 1936 correspond to the aboveground features and foundations noted at 41DT202.

A structure is shown at this location on the 1941 map of the area. The U.S.G.S. Cooper South 7.5' Quadrangle map (1964) also shows a barn at this location, but it has since been dismantled. The barn may have been associated with site 41DT201, which lies 200 m (656 ft) to the west. Site 41DT202 is part of the Liberty Grove community and was occupied during the early to mid-twentieth century.

Archaeological Investigations

Fieldwork consisted of pedestrian survey and mapping of all aboveground features. A single shovel test (25 cm x 25 cm x 35 cm) excavated by the northwest corner of a concrete foundation, was used as the permanent datum. No artifacts were noted within this unit. Ground visibility was poor (20%), but all of the aboveground structural features indicated that this site was never used as a domicile.

A concrete foundation, corral, and artifact scatter were the most evident features (see Figure 8-115). The features and artifacts appear to

represent the remains of a mid-twentieth century or recent ranch or farmstead. The visible features include a rectangular concrete foundation (9 m x 8 m) with concrete block walls and two adjoining wire fence/wooden post corrals. The concrete platform/foundation could be a barn or loading dock. A stock pond lies 45 m north of this feature.

Recent refuse (less than two years old) is scattered over the site. In addition, modern bottle glass, planks with wire nails, corrugated sheet metal, concrete blocks, and TEXAS (machine-made) bricks are scattered around the foundation area. Due to the recent age of these materials, no collections were made at the site.

Recommendations

Site 41DT202 does not appear to be part of the original Walker Anderson farmstead. It was probably constructed by his heir, E. S. Anderson, sometime after 1936. This inference is based upon the WPA surveys, which do not indicate any dwelling or barn that is similar in size to the poured-concrete foundation noted during the survey. Also, archival and informant researches indicate that this property does not contribute significantly to local and regional history. The structure at this site may have served as a dairy. Due to recent occupation and use, this site is deemed clearly not eligible (Category III) for the National Register.

Site 41DT203

This newly recorded historic site (Figure 8-116; see Figure 8-86) is located in oak woods at 137 m (450 ft) above msl. Cannon Creek lies 250 m (820 ft) to the east. Doctors Creek flows 1.25 km (0.78 mi) south of the site. The site is 200 m (656 ft) east of FM 1880 and 3.1 km (1.9 mi) south of Cooper. An occupied farmhouse is located 200 m (656 ft) to the southwest. The mapped soil type is Annona loam. In its native state, this was a post oak savannah with a floodplain forest and an upland prairie to the west.

Stratigraphy

The Annona loam soil series is composed of two A soil horizons over at least five

well-developed B soil horizons (see Chapter 6). Three natural strata were identified at the 41DT203 site locus. These strata are discussed in order from the oldest (lowest) to youngest (uppermost).

Stratum I is the upper B soil horizon. It is a dark red (2.5YR3/6) clay with an abrupt, wavy, upper boundary at 23 cm below surface. It extends to an average depth of 40 cm below ground surface. Stratum I is culturally sterile and continuous across the 41DT203 site locus.

Stratum II is the lower A soil horizon. It is a light yellowish brown (10YR6/4) loam with a clear, wavy, upper boundary 0-10 cm below ground surface. This stratum and underlying Stratum I have been exposed in the stock tank and eroded drainage areas within and adjacent to the site.

Stratum III, the surface soil horizon, is absent in ca. 30% of the site area. This stratum is a dark grayish brown (10YR4/2) loam. All artifacts noted at this site locus rested on the surface of this stratum.

Archival Information

Sites 41DT154, 41DT192, 41DT194, 41DT203, and 41DT204 are located on the J. Turner (A-355) Survey, a 130 ha (322 acre) tract that was patented in 1841 (Delta County Deed Book B:58).

Site 41DT203 is located on an 19.2 ha (47.5 acre) tract which belonged to J. F. Anslee of Cooper in 1936. He obtained the property in 1933 for \$920 (Delta County Deed Book 70:238). In 1936, the value had depreciated to \$285. No house was present on the tract at that time. In all, 8.1 ha (20 acres) were in pasture, 8.3 ha (20.5 acres) were in cut-over woodland, and 0.8 ha (2 acres) were wasteland. No house is shown at this location on the 1941 highway map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey and shovel tests. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

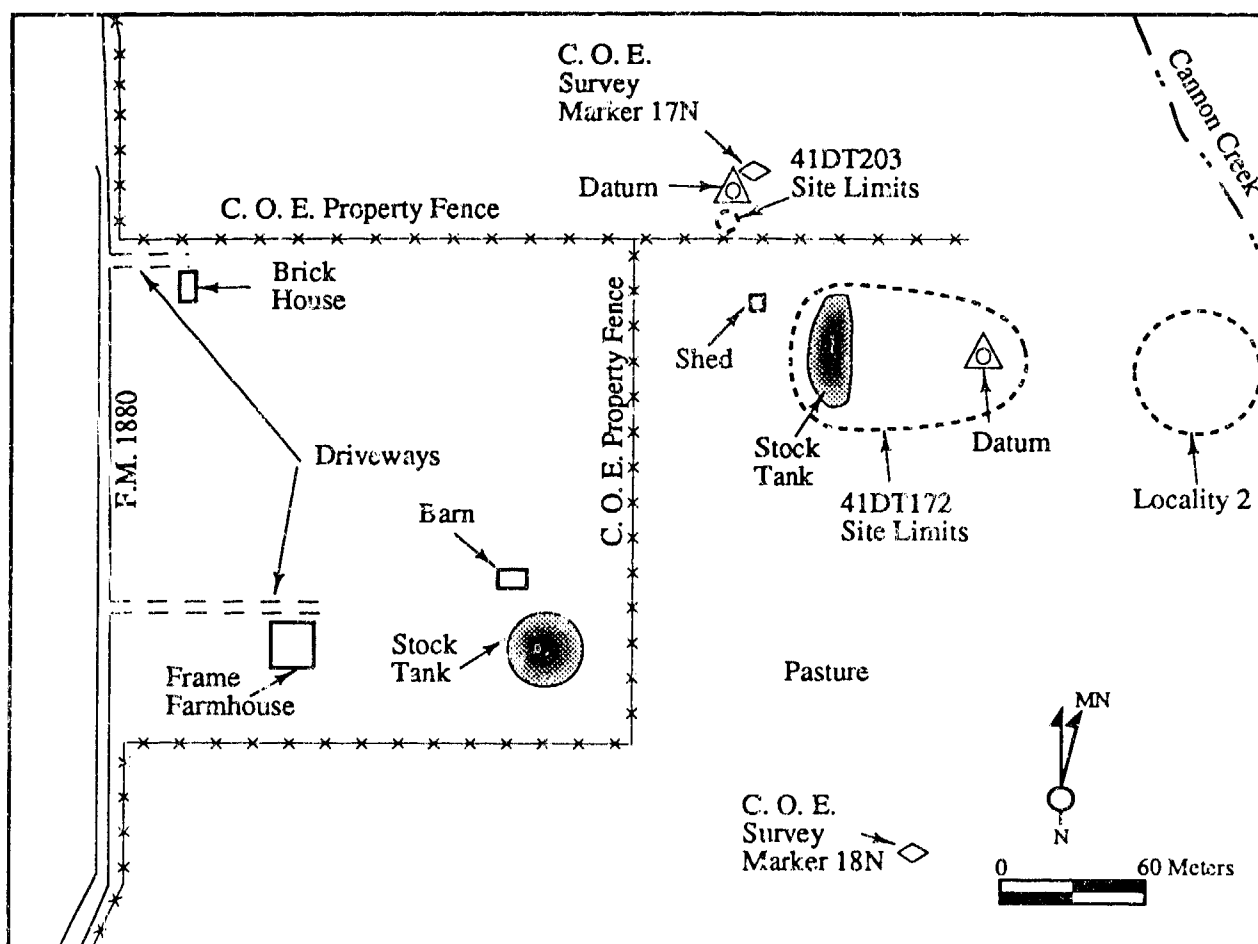


Figure 8-116. Plan of sites 41DT203 and 41DT172, showing locations of site limits (as defined by surface artifacts and features), site datum excavations, and land modifications.

The total site area is approximately 2,000 m². The site consists of one intact brick (machine-made) chimney noted during pedestrian survey. No other structural remains are visible on the surface. The chimney is constructed of Atlas and Ferris brick, stands 3.5–4 m high, and measures 1.5 m at the base. A fireplace is at the north side. Artifacts scattered across the site appear to be modern trash deposited after site abandonment. The structure associated with the chimney appears to have been dismantled, and all materials seem to have been carried off of the site. This chimney may be the remains of a mid-twentieth century house site. A barbed wire fence located south of the chimney appears to mark the southern boundary of the site.

Twenty shovel tests were excavated at 10 m intervals, but no historic artifacts were recovered.

Since all units were sterile, no map was produced. One flake was found during testing and is thought to be an isolated find. One fire-cracked rock fragment was also collected during pedestrian survey. This artifact suggests that a low-density prehistoric component may be present (see Figure 8-116).

Recommendations

Due to the recent historic occupation, this site is judged to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT204

This newly recorded historic site (Figure 8-117) is an upland site in second growth oak and red cedar. Cannon Creek is 100 m (328 ft) east and Doctors Creek flows 1.57 km (0.97 mi) south of the site. The site is 270 m (885.6 ft) east of FM 1880 and 2.75 km (1.71 mi) south of Cooper. A modern brick house is located ca. 120-150 m (393.5-492 ft) to the southwest. Elevation at the

site ranges between 135.6 m (445 ft) and 137 m (450 ft) above msl. The mapped soil type is Annona loam. In its native state, this was a post oak savannah.

Stratigraphy

The Annona loam soil series is composed of two A soil horizons over at least five well-developed B soil horizons. Three natural

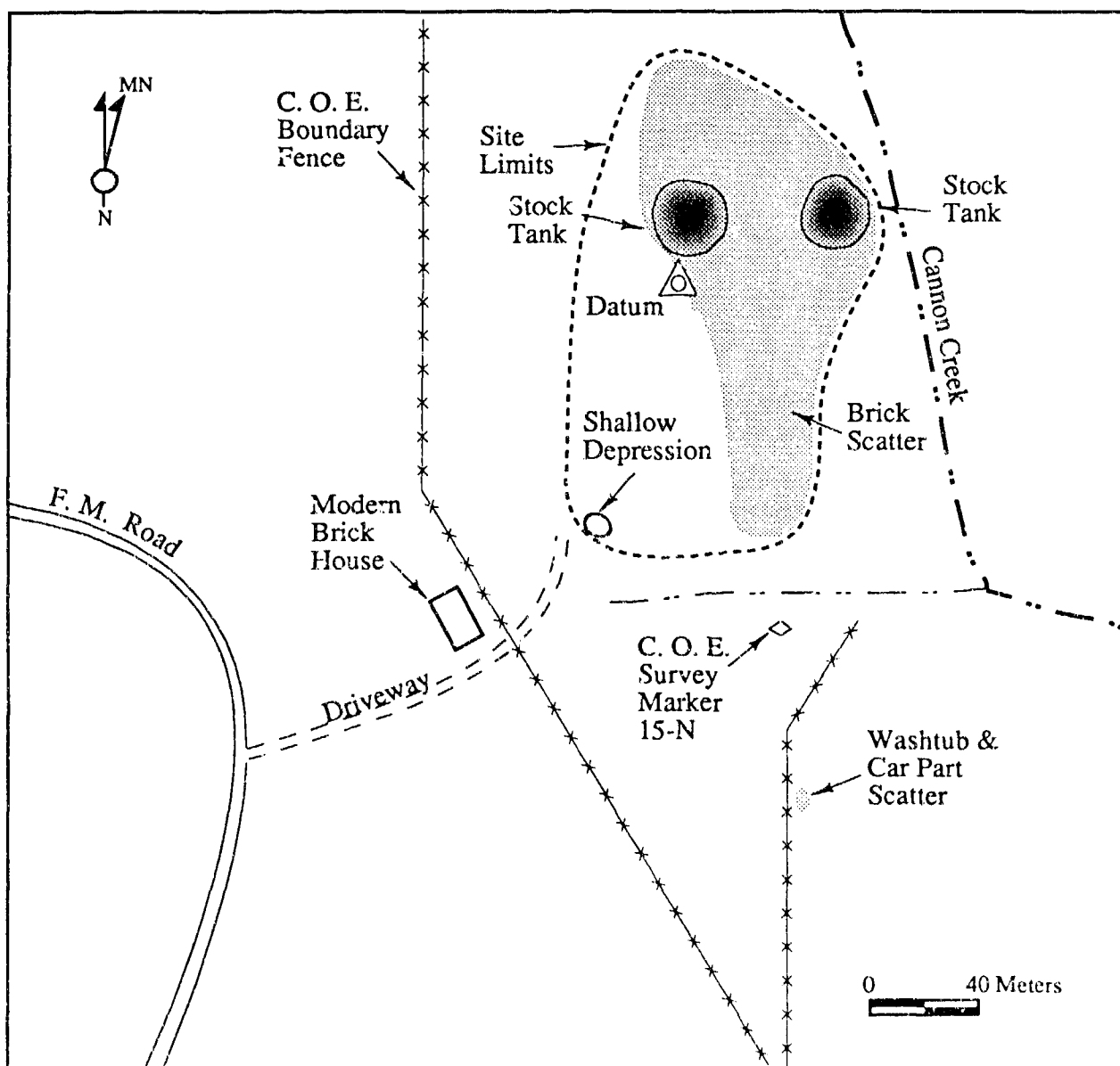


Figure 8-117. Plan of site 41DT204, showing locations of site limits (as defined by surface artifacts), site datum, and land disturbances.

strata were identified at site 41DT204. These strata are discussed in order from the oldest (lowest) to youngest (uppermost).

Stratum I is the upper B soil horizon. It is a dark red (2.5YR3/6) clay with an abrupt, wavy, upper boundary at 23 cm below ground surface. It extends to an average depth of 40 cm below ground surface. Stratum I is culturally sterile and continuous across site 41DT204.

Stratum II is the lower A soil horizon. It is a light yellowish brown (10YR6/4) loam with a clear, wavy, upper boundary 0-10 cm below ground surface. This stratum, and underlying Stratum I, have been exposed in the stock tank and eroded drainage areas within and adjacent to the site.

Stratum III, the surface soil horizon, is absent in ca. 30% of the site area. This stratum is a dark grayish brown (10YR4/2) loam. All artifacts noted at this site locus rested on the surface of this stratum.

Archival Information

Sites 41DT154, 41DT192, 41DT194, 41DT203 and 41DT204 are located on the J. Turner (A-355) Survey, a 130 ha (322 acre) tract that was patented in 1841 (Delta County Deed Book B:58).

Site 41DT204 is located on a 6.3 ha (15.5 acre) tract owned by J. W. Chapman of Cooper in 1936. He obtained the property in 1901 for \$1.00 (Delta County Deed Book 6: 218). In 1936, there was no house on the property, which was in woodland. A house is shown in the vicinity on the 1941 highway map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey and shovel tests. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The core site area covers approximately 1,000 m² with over 8,000 m² (2 acres) of ranching facilities. A pedestrian survey of this area noted a surface scatter of glazed and unglazed bricks which measured 200 m north-south by 100 m

east-west. Two nearby stock tanks may also have been part of the site (see Figure 8-117). A 3.5 m diameter, circular shallow depression is located at the southwest corner of the clearing, southwest of the stock ponds. This depression may be the remains of a storm shelter. No other artifacts were found at the site, and no collections were made.

Recommendations

This site may represent the remains of a 1941 house site which has been bulldozed. Several small linear mounds containing broken brick are located in the cleared area and may represent the remains of structures. Due to the disturbance of this site, it has poor integrity. It is clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT205

This newly recorded historic site (Figure 8-118) is located on a slight rise in open pasture at 134 m (440 ft) to 137 m (450 ft) above msl elevation. An intermittent drainage lies 405 m (1,328.4 ft) west of the site. The site lies immediately west of FM 1880, 950 m (3,116 ft) south of Liberty Grove Cemetery, and 4.62 km (2.9 mi) south-southwest of Cooper. The mapped soil type is Wilson silt loam. In its native state, this area was an upland prairie with a floodplain forest to the south. It has been heavily cultivated in the past and is in fallow pasture today.

Stratigraphy

Three natural soil strata were identified during deep testing of the landform containing the site 41DT205 locus. Backhoe Trench 35, excavated by Collins and Bousman in 1985 (Bousman, Collins, and Pertulla 1988: 123-124), is located ca. 200 m (656 ft) south of site 41DT204 at the same elevation and on the same soil. The stratigraphy of that unit is described from the oldest (lowest) to youngest (uppermost).

Stratum I is a light gray (5Y7/2) clay with yellowish brown (10YR5/8) mottles. Manganese

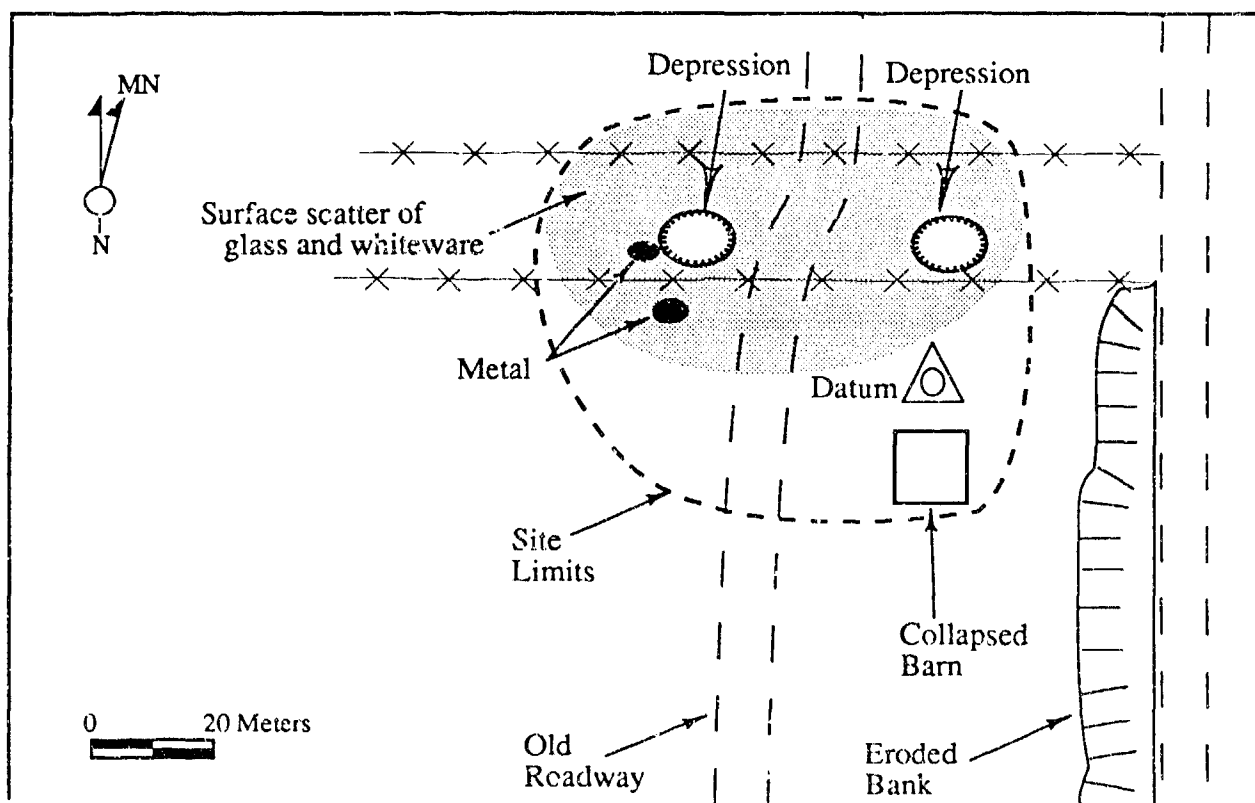


Figure 8-118. Plan of site 41DT205, showing locations of site limits (as defined by surface artifacts and features), site datum, and land disturbances.

concretions are abundant. This stratum has a gradual upper boundary at 175 cm below surface and was excavated to a maximum depth of 200 cm below ground surface. It is culturally sterile.

Stratum II is a light gray (5Y7/2) clay with common manganese concretions. It has a gradual upper boundary at 40 cm below surface, and is culturally sterile.

Stratum III is a dark gray (10YR4/1) clay loam. This is the surface horizon and the modern plow zone. All cultural materials from 41DT205 are derived from this stratum.

Archival Information

A house is shown at this location on both the 1936 and 1941 maps of the area. No earlier maps show a dwelling at the location of site 41DT205. Site 41DT205 (along with 41DT224) is located on the E. B. Ewing (A-122) Survey. In 1935, site 41DT205 was on a 13.3 ha (32.95 acre) tract which belonged to S. J. Treadway of Athens. He

obtained the property in 1931 for \$2,300. In 1936, the property had depreciated to \$450. All land was in cultivation by tenants, with 3.6 ha (9 acres) in corn and the remainder in cotton. No house was present at the 41DT205 site locus. Local informants could not identify previous occupants of this site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey and shovel tests. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 20 cm), the site datum, was excavated 10 m north of the barn. No artifacts were recovered.

The total site area is 4,800 m². A collapsed wooden structure, measuring 8 m x 4 m and located 30 m west of FM 1880 is thought to be the remains of a barn or shed (see Figure 8-118). An

old north-south trending road traverses the site 20 m west of the collapsed structure. Two depressions in the ground surface are located 40 m north of the structure. One depression is located east of the old road and the other is located 50 m to the west. These depressions are thought to be the remains of either cisterns or storm cellars. Sheet refuse is present across the site. The surface scatter of artifacts includes wood, nails, sheet metal, and brick.

The artifact assemblage recovered from ground surface at 41DT205 consists of 27 items: five refined earthenwares, 16 pieces of bottle glass, one table glass fragment, one machine-made brick, one knife blade, and a Chrysler Motors medallion.

Two of the refined earthenwares are gilded porcelains which date from 1890 to the present. Six bottle glass fragments were made by an automated bottling machine and date from 1910 to the present. One liquor bottle is embossed with "Federal Law prohibits sale or reuse of this bottle" and dates to the 1950s.

Recommendations

The artifacts recovered at this site suggest the remains of a historic home site dating after 1936 to the present. The site has been impacted by cattle ranching activities. Archaeological, archival, and informant researches all indicate that there is no historical significance to this property. The site is judged to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT206

This newly recorded historic site (Figure 8-119) lies in open pasture/grassland, 2,160 m (7,084.8 ft) east of Johns Creek. The site lies 1.2 km (0.74 mi) west of Liberty Grove. Elevation at the site is 135.6 m (445 ft) above msl, and the mapped soil type is Wilson silt loam. In its native state, this area was an upland prairie. It has been heavily cultivated in the past and is in fallow pasture today.

Stratigraphy

A single soil stratum was identified at the 41DT206 site locus. This is a dark gray (10YR4/1) clay loam, which is the modern plow zone. All cultural materials are derived from this stratum, which was excavated to a maximum depth of 20 cm below ground surface.

Archival Information

Site 41DT206 (along with sites 41DT216 and 41DT217) is located in the E. McIntire Survey (5-18). A house is shown at the approximate location of site 41DT206 on the 1941 highway map. Local informants were unable to identify any of the previous occupants of this site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey and shovel testing. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 20 cm) was excavated 2 m east of the northeast corner of the concrete foundation. No artifacts were recovered.

The total site area is 6,400 m². A series of features and associated artifact scatters are widely distributed over the site (see Figure 8-119). A concrete house foundation is present on the east side of the site. A possible storm cellar is located 20 m east of the house foundation, and a collapsed brick cistern is located near the house. Wooden beams, planks, and sheet metal were also noted.

The artifact assemblage recovered from the ground surface at 41DT206 consists of 46 items, including 11 refined earthenwares, three stonewares, 17 bottle glass fragments, 11 pieces of table glass, one milk glass canning lid, one metal fragment, a writing slate, and one pig molar. The ironstone whitewares date between 1840 and 1910. The brown stonewares are dated ca. 1890-1930. Two fragments of manganese solarized bottle glass and four table glass fragments date between 1880 and 1920. One brown snuff bottle, made by an automated bottling machine, dates from 1910 to the present.

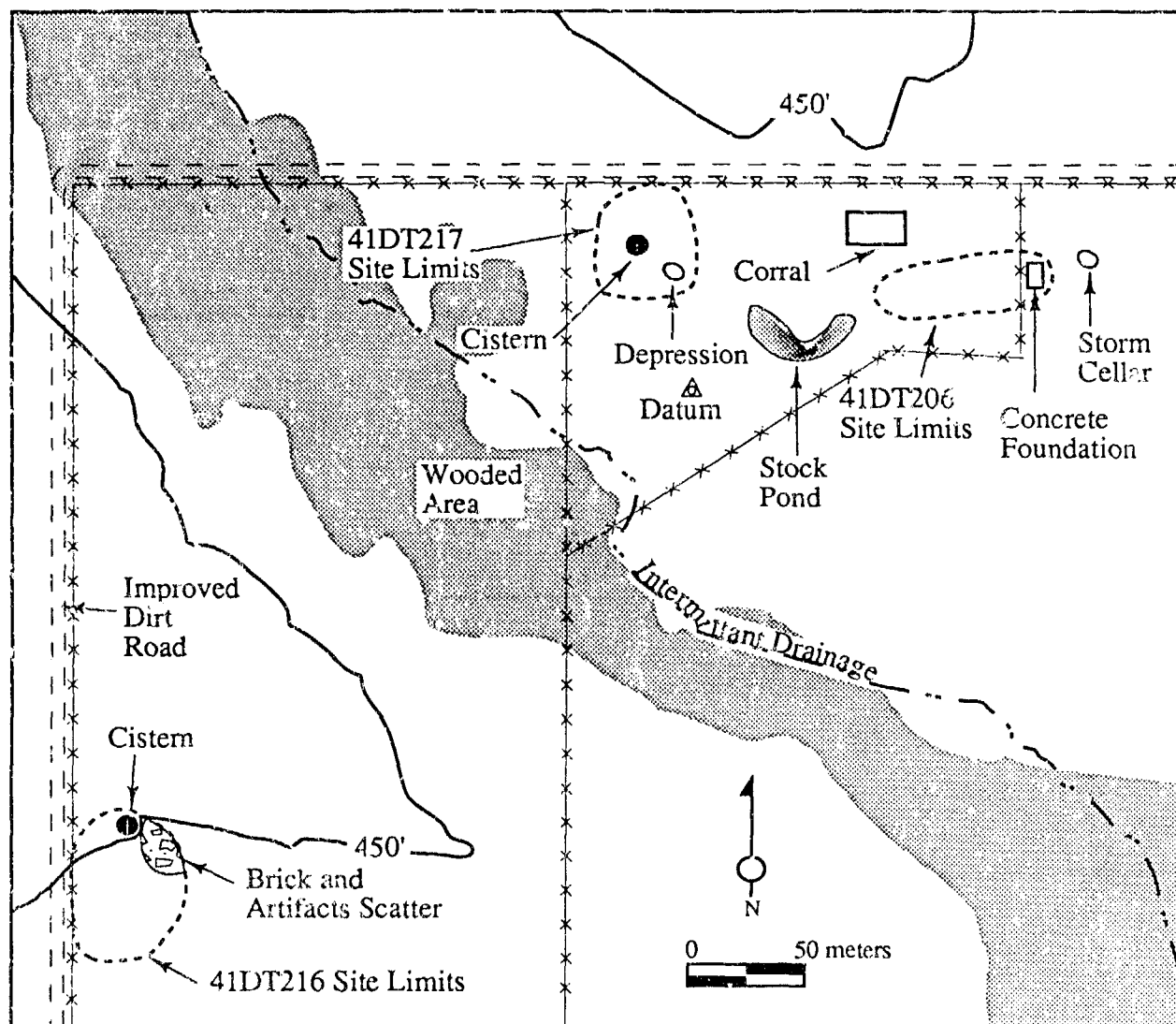


Figure 8-119. Plan of sites 41DT206, 41DT216, and 41DT217, showing site limits as defined by surface artifacts and features.

Recommendations

A house is shown at this location on the 1941 highway map of the area. The house foundations do not appear to be more than 50 years old. This site appears to be a small, short-term scratch farm. Based on the cultural remains noted, the site has low potential to address the research questions outlined in the Research Design. The site is deemed clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT207

This newly recorded historic site (Figure 8-120) is located on eastern sloping terrain above the Doctors Creek floodplain. Doctors Creek flows ca. 480 m (1,574.4 ft) to the east. The site lies 700 m (2,296 ft) west of FM 1880 and 250 m (820 ft) north of a dirt road that extends west from the old Liberty Grove Cemetery. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this area was post oak savannah adjacent to floodplain forest.

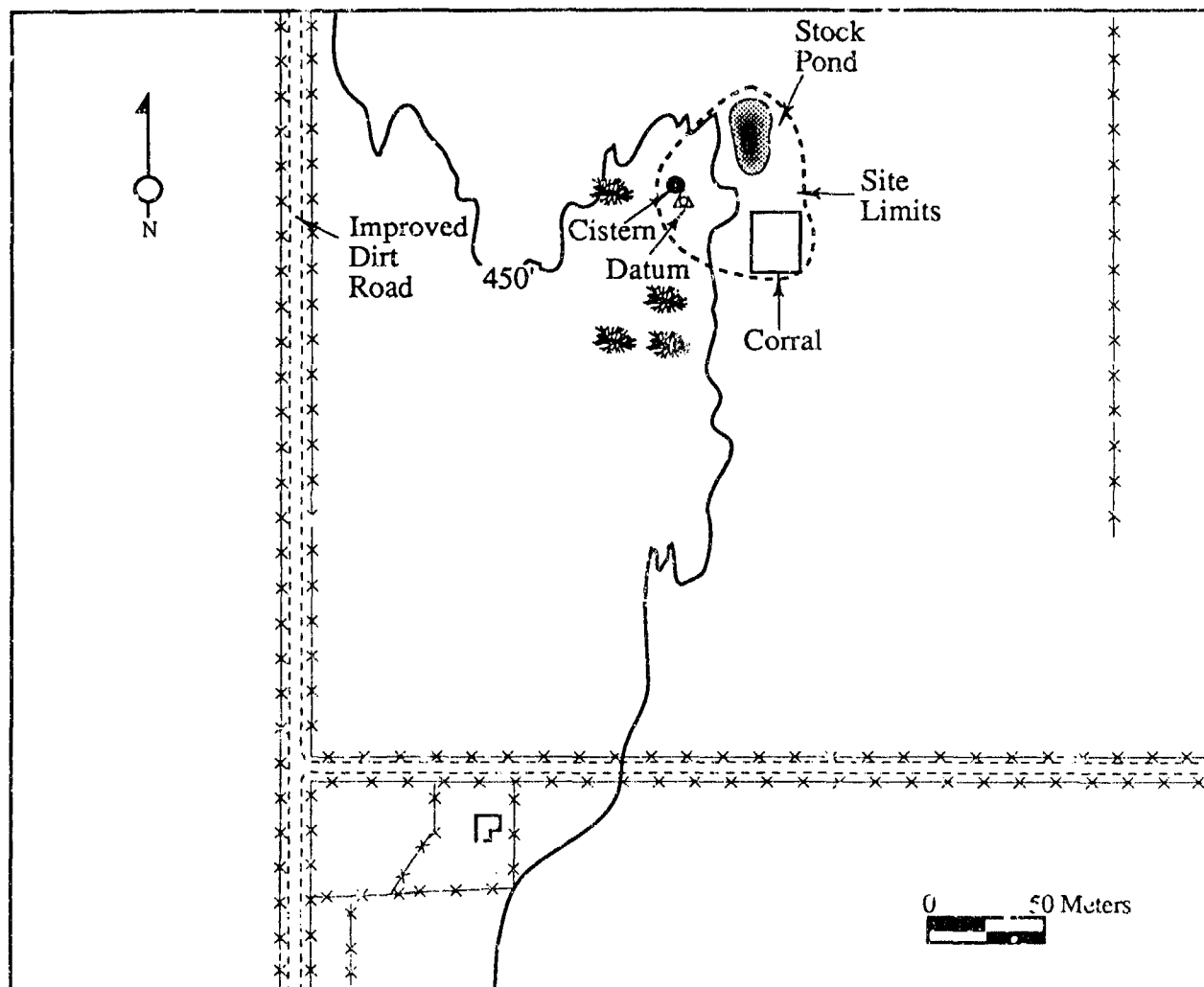


Figure 8-120. Plan of site 41DT207, showing locations of site limits (as defined by surface artifacts and features), site datum, and land disturbances.

Stratigraphy

The two natural soil strata identified at site 41DT207 are described below from older (lower) to younger (upper). Stratum I is the upper portion of the B soil horizon. It is a brown (10YR4/3) clay with a wavy upper boundary at 15 cm below surface. Its average depth is 35 cm below ground surface. Stratum I is culturally sterile and is continuous across the site locus.

Stratum II, the surface soil horizon, is the modern plow zone. It is a dark brown (10YR3/2) clay. All cultural materials recovered during the present investigations at the site were derived from this stratum.

Archival Information

Site 41DT207 is located on one of several grants to K. D. Spain. This particular tract is not on file in the Delta County Records, nor was it found in 1936. Site 41DT207 is located on a 19.8 ha (49 acre) tract which was owned by Mrs. S. E. Stevenson of Cooper. She obtained the property in 1894 (Delta County Deed Book U: 52) for \$500. In 1936, the tract was worth \$400. Mrs. Stevenson leased the property to tenants. At that time, 0.4 ha (1 acre) was reserved for a house, 13.3 ha (33 acres) were in pasture, 3.2 ha (8 acres) were in cotton cultivation, and 2.8 ha (7 acres) were wasteland.

The house that was once present at the site was a gabled, box and strip dwelling that measured 28 ft x 22 ft. It had one story and three rooms. A shed and a barn were also present on the farmstead. Since the dwelling was a box and strip house, a design that does not withstand Texas weather for long, this house does not appear to date as early as the 1894 purchase of the property. Many houses of this type were built from the 1910s to 1930s in the Cooper Lake area (see Chapter 7).

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey and shovel testing. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 20 cm) was excavated 1.5 m south of a cistern that was identified at the site center. Only commercial brick fragments were present, due to the proximity of the cistern. A permanent datum was placed in this unit.

The total site area is approximately 2,200 m² (23,681 ft²). A stock pond is located in the northeastern portion of the site. The brick cistern is located 20 m to the west of the stock pond (see Figure 8-120). A recent corral is located south of the stock pond. The surface trash included bottles, appliances, barbed wire, metal, a McCormick Farmall tractor, and brick. There observed cultural materials were less than 50 years old.

Recommendations

The site may have been a twentieth century house site, although there are no visible traces of structures. The site is currently used for ranching. Archaeological, archival, and informant researches all indicate that there is no historical significance for this property. Site 41DT207 is judged to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT208

This newly recorded historic site (Figure 8-121) is located 480 m (1,574.4 ft) west-southwest of Honey Creek and ca. 1.68 km (1.04 mi) north of the South Sulphur River. The site lies 900 m (2,952 ft) west-southwest of the Free Hope Church and 1.9 km (1.2 mi) south of Klondike. Elevation at the site varies between 134 m (440 ft) and 137 m (450 ft) above msl. The mapped soil type is Crockett loam. In its native state, this area was a post oak savannah. It has been cleared and intensively cultivated and is fallow pasture today.

Stratigraphy

Two natural soil strata were identified at site 41DT208. These strata are discussed in order from older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a light olive brown (2.5Y5/4) clay with an abrupt wavy boundary at 20 cm below ground surface. It extends to an average depth of 43 cm below ground surface. Only the upper 5 cm of this stratum yielded artifacts, primarily metal items.

Stratum II is a very dark grayish brown (10YR3/2) loam. It is the surface A soil horizon which is the modern plow zone. The majority of the artifacts from the site were derived from this stratum.

Archival Information

Site 41DT208, along with sites 41DT186, 41DT209, and 41DT249, is located on the 512.78 William Kimble Survey (A-208, C272). This 203.6 ha (503 acre) tract was granted to William Kimble, and transferred and patented to Jacob C. Chisholm on 22 July 1852 (Delta County Deed Book I-H: 459). This site is shown on the 1914 Levee Improvement District Map. In 1936, the 6.1 ha (15 acre) tract containing site 41DT208 was owned by J. C. Bailey. Mr. Bailey did not obtain deed records at that time, and such information was unavailable during our recent archival investigations. No house was listed on the property at that time, and the entire tract was in woodland.

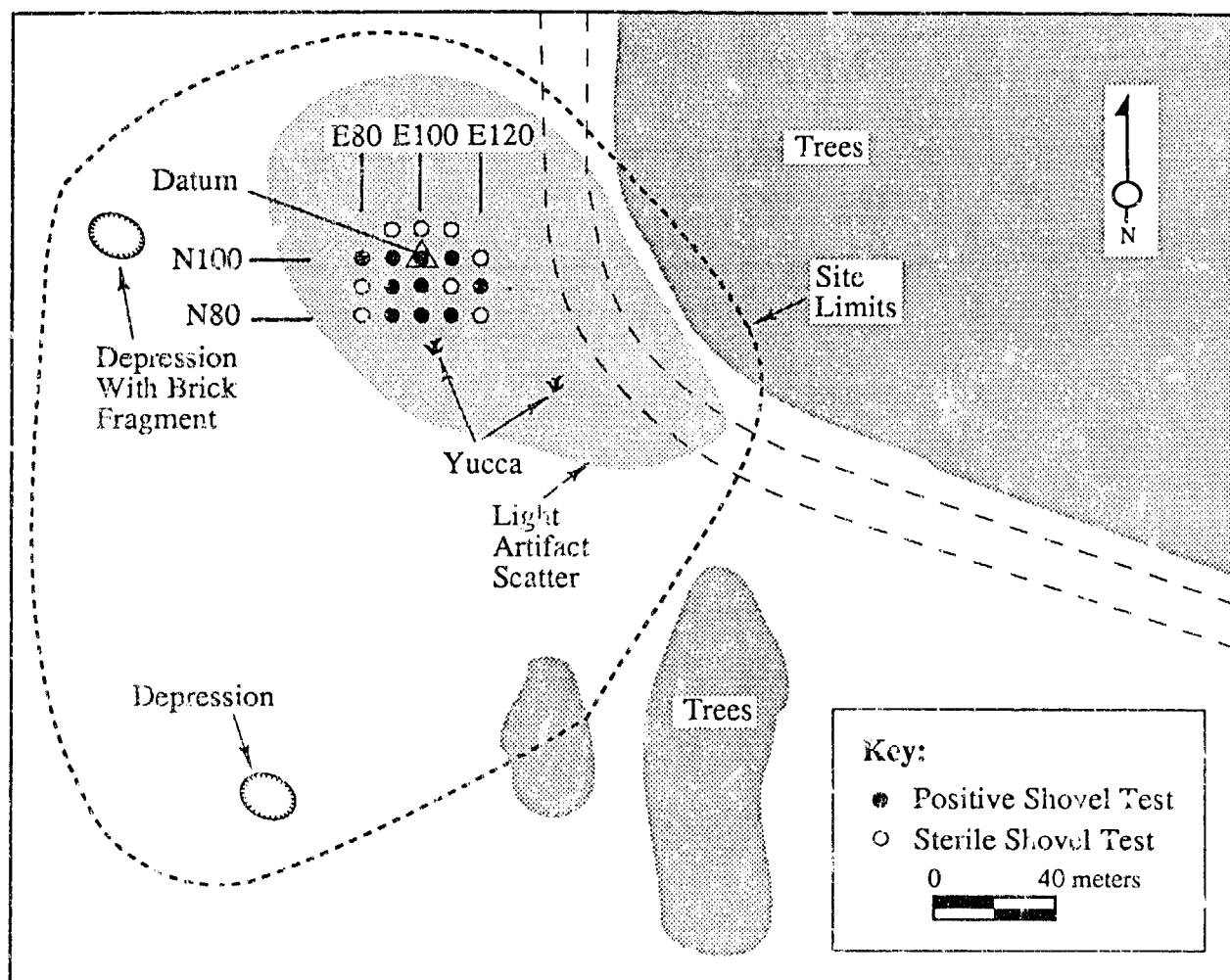


Figure 8-121. Plan of site 41DT208, showing locations of shovel tests, surface artifacts, surface features, and site limits as defined by surface artifacts.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and shovel testing. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The total site area, based on surface scatter and the results of shovel testing, is 600 m². Two subsurface depressions were noted on the western portion of the site, but no structural remains are visible (see Figure 8-121). Excavation of 18 shovel tests placed at a 10 m intervals revealed that the site is shallow, with 278 artifacts being recovered only in the top 25 cm of the site

deposits in 10 shovel tests. Surface collection yielded 12 decorated refined earthenwares, stoneware, a bottle neck and bottle base (both manganese solarized), glazed brick, colored glass, and assorted ceramic fragments. The site also contained several garden pots with domestic flowers. The test excavations yielded an array of material cultural items that indicates household activities (Table 8-22). Spatial separation between potentially discrete components was noted.

Four ironstone earthenwares and vessel glass (ca. 1880-1910) were recovered from shovel tests N90E100, N90E110, N90E120, N100E90, N100E100, and N100E110. The brown stonewares date ca. 1890-1930. The gilded whitewares date from 1890 to the present. One manganese

TABLE 8-22
Distribution of Artifacts from Site 41DT208,
Delivery Order Number 7 Study Area

Unit	Ref E-ware	Stone- ware	Porce- lain	Mang Vglass	Other Vglass	Table Glass	Wdw Glass	Cut Nails	Wire Nails	Brick	Tin Can	Other Metal	Misc	Total
N80 E90	2	—	—	—	—	—	—	—	—	2	—	—	—	4
N80 E100	5	—	—	—	2	—	—	—	—	4	—	—	—	11
N80 E110	—	—	—	—	1	—	1	—	—	—	—	1	—	3
N90 E90	1	—	—	—	—	—	—	—	—	—	—	—	—	1
N90 E100	2	—	—	1	—	1	—	—	—	1	—	1	—	6
N90 E120	—	—	—	1	1	—	—	—	—	—	—	—	—	2
N100 E90	—	—	—	—	1	—	—	—	—	—	—	—	—	1
N100 E100	3	—	—	2	3	—	—	1	—	—	—	2	2	13
N100 E110	3	2	—	—	5	—	—	—	1	42	85	—	—	138
N100 E110	1	—	—	1	1	—	—	—	—	51	—	2	—	56
Surface	12	8	1	2	13	3	—	—	—	3	—	1	—	43
Total	29	10	1	7	27	4	1	1	1	103	85	7	2	278

KEY: Ref E-ware = refined earthenware; Mang Vglass = manganese vessel glass; Wdw Glass = window glass; Misc = miscellaneous artifacts.

solarized Coca-Cola bottle with a hand-finished neck dates ca. 1890–1920. One aqua bottle with a double loop and a hand-finished neck dates ca. 1850–1920. Four clear bottles made via automated bottling machine date from 1910 to the present.

Recommendations

The artifacts recovered from the site suggest the presence of the remains of a historic homestead dating from the late nineteenth to the first two quarters of the twentieth centuries. The archival map information indicates a house in the vicinity of site 41DT208 in 1914. This house, however, is not listed on J. C. Bailey's property inventory. It is possible that this is a short-term occupation dating ca. 1880 to the early 1930s. The material culture and spatial distributions of temporally diagnostic artifacts indicate a cultural deposit that has potential to yield behaviorally meaningful information relevant to the material culture and settlement research questions outlined in the Research Design. Based on this evidence, site 41DT208 is deemed potentially eligible (Category II) for nomination to the National Register, and further evaluation is recommended.

Site 41DT209

This newly recorded historic site is located in pasture 120 m (393.6 ft) south of Honey Creek on an east-southeast-trending slope. The site lies 2 km (1.2 mi) southwest of Klondike at an elevation of 134 m (440 ft) above msl. The mapped soil type is Crockett loam. In its native state, this area was a post oak savannah with a floodplain forest to the south. It has been cleared in the past, intensively cultivated, and presently is in fallow pasture.

Stratigraphy

A single natural soil stratum was identified at site 41DT209. It is a very dark brown (10YR3/2) loam. It is the A soil horizon and has been plowed in the past. It is continuous across the site.

Archival Information

Site 41DT209, along with sites 41DT186, 41DT208, and 41DT249, is located on the 512.78

William Kimble Survey (A-208 and C272). This was a 204 ha (503 acre) grant to William Kimble, and was transferred and patented to Jacob C. Chisholm on 22 July 1852 (Delta County Deed Book 1-H: 459).

Site 41DT209 is shown on the 1914 Levee Improvement Map. In 1936, the 5.1 ha (12.5 acre) tract containing 41DT209 was owned by the estate of J. L. Robnett. Mr. Robnett lived in Klondike prior to his death, and had obtained the property in 1889 (Delta County Deed Book 0:186). All 5.1 ha (12.5 acres) were cultivated, and no house was listed.

Informants reported that site 41DT209 was the house of Sampy and Roxie English. Sampy was born in 1865 and died in 1936. His wife, Roxie (1865–1943), taught grades one through six at the Friendship School from 1900 to ca. 1943. They were apparently tenants, since they were not listed as landowners in the WPA survey.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 15 cm) excavated for the site datum was culturally sterile.

The foundations and remains of two small structures and associated fence lines were noted in pedestrian survey. The features and an associated artifact scatter cover an area of 3,000 m² (32,292 ft²). Structural remains consist of five burned square-cut piers with some sheet metal and cable dumped on the ruins. Approximately 40 m southwest of the first possible structure is a 7 m x 4 m scatter of wooden piers, brick fragments, and cable, possibly the remains of a second structure. Surface artifacts noted in survey include glass, metal debris, and brick fragments. These artifacts were not collected. A selective surface collection made at the site yielded the neck of a large glass jug and a small piece of cable.

Recommendations

The site appears to represent the remains of a historic home site. Although occupation of the

site is thought to post-date 1936, based on the material remains, a house was shown in the vicinity of site 41HP209 on the Levee Improvement District Map (1914). The majority of aboveground structural remains are gone. Cattle grazing has caused some impacts to the site. This site could potentially be the location of the initial farmstead of Sampy English, who settled in the late nineteenth century. Site 41DT209 could potentially contain information related to ethnic integration and settlement questions discussed in the Research Design. The site, therefore, is classified as Category II, and further evaluations are recommended.

Site 41DT210

This newly recorded historic site (see Figure 2-107) is located in flat, open area on the southwestern end of a low, narrow, north-south-trending ridge. Honey Creek lies 330 m (1,082.4 ft) south of the site. The site is 190 m (623.2 ft) west of the Free Hope Church site and 1.7 km (1.1 mi) south of Klondike. Elevation at the site is 138 m (454 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was a post oak savannah with a floodplain forest to the south. This area has been cleared and intensively cultivated and is fallow pasture today.

Stratigraphy

The single natural soil stratum identified at site 41DT210 is a very dark brown (10YR3/2) loam. It is the A soil horizon and has been plowed in the past. It is continuous across the site area.

Archival Information

Site 41DT210 is the modern house of Jeff Blandon. The dwelling is located outside of the CE fence, but components of the farm fall within the project boundaries.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5-m

interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. The artifacts are associated with a barn, corral and old road, all three of which are within the project area. The Jeff Blandon house is also associated with the site, but lies just outside the project area.

The artifact assemblage collected from the ground surface at 41DT210 consists of 13 items, including three refined earthenwares, one stoneware, five pieces of bottle glass, one table glass fragment, one porcelain doll part, and two milk glass canning lids. The ironstone whitewares date between 1840 and 1910. The brown stonewares date ca. 1890-1930. The porcelain doll dates between 1870 and 1940. The manganese solarized bottle glass and table glass fragments date ca. 1880-1920.

Recommendations

Based on the relatively recent age of these materials and the lack of a full archaeological deposit within the project boundaries, this site has little potential to address the Research Design. The site is judged to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT211

This newly recorded historic site (Figure 8-122) is located in a flat, open area bordered by a modern road. Doctors Creek lies 432 m (1,417 ft) north of the site. The site is 1.72 km (1.07 mi) east of FM 1880 and 2.74 km (1.7 mi) south of Cooper. The site lies at 131 m to 134 m (430 ft to 440 ft) above msl elevation, and the mapped soil type is Crockett loam.

In its native state, this portion of the project area was a transitional zone between upland prairie and post oak savannah. The site 41DT211 area has been cleared and intensively cultivated in the past, and the time of the present investigations was in fallow pasture.

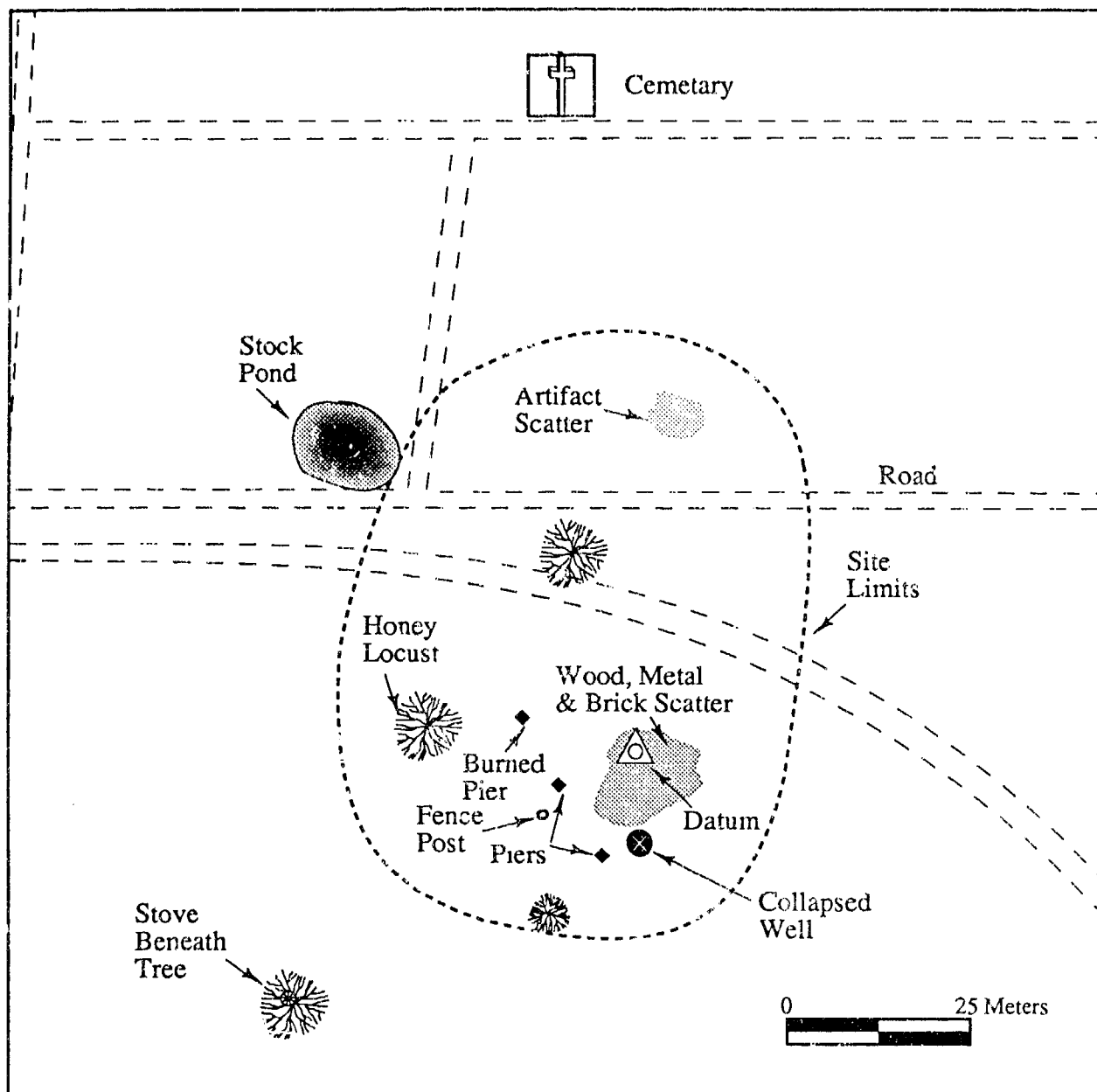


Figure 8-122. Plan of site 41DT211, showing locations of site limits (as defined by surface artifacts), site datum, and land disturbances.

Stratigraphy

The single natural soil stratum identified at site 41DT211 is a very dark brown (10YR3/2) loam. It is the A soil horizon and has been plowed in the past. This stratum is continuous across the site area.

Archival Information

Site 41DT211 is located (along with site 41DT224) within the Andrew B. Ewing Survey, a pre-exemption grant from Hopkins County that was surveyed by William Evans on 14 August 1854. The chain carriers were Andrew Ewing

and Robert Hannah (41DT126). In 1936, site 41DT211 was located in the northeastern corner of a 12.3 ha (30.5 acre) tract owned by Fidelity Savings and Trust Co., 802 Praetoria Building, Dallas, Texas. This company had purchased the property on 12 October 1933 (Delta County Deed Book 71:131). This farm was occupied by a tenant who cultivated 7.5 ha (18.5 acres; 6.1 ha [15 acres] in corn and 1.4 ha [3.5 acres] in cotton). The house rested on 0.4 ha (1 acre), 0.4 ha (1 acre) of land was reserved for a garden, and 4 ha (10 acres) for pasture.

Archaeological Investigations

Fieldwork at this site consisted of pedestrian survey, mapping surface features and structural ruins, and the collection of visible artifacts. A single shovel test (25 cm x 25 cm x 35 cm) was excavated for the site datum (see Figure 8-122). This unit was sterile, but based on the topsoil above the clay, the historic deposit ranges 0-25 cm below surface. The site consists of a collapsed well, wooden piers, fence posts, and an artifact scatter, all of which were identified in the pedestrian survey. The artifact scatter included an array of historic artifacts (e.g., sheet metal, wood, brick, and stove parts) associated with domestic activities and structural remains of a dwelling.

The artifact assemblage recovered from the ground surface at 41DT211 consists of 58 items: 13 refined earthenwares, four stonewares, 14 bottle glass fragments, 15 pieces of table glass, one handmade brick fragment, two porcelain doll's legs, one glass marble, one carbon battery pole, one small six-sided tile, one u-bolt, one lantern ring, one wrench, two spoons, and a belt buckle. In addition to the historic items, a single Ogallala quartzite flake was recovered.

The ironstone whitewares date between 1840 and 1910. One gilded whiteware dates from 1890 to the present. Two hand-painted ironstones date ca. 1850-1880. The stonewares date ca. 1890-1930. The manganese solarized bottle glass dates between 1880 and 1920. The porcelain doll parts date ca. 1870-1940. One spoon has a "Holmes and Edwards" maker's mark, the other, "Allegheny NY stainless steel." The belt buckle

has a "R.A.U.F. Co. Providence, R.I." maker's mark. Five bottle glass fragments were made by an automated bottling machine and date from 1910 to the present.

Recommendations

Based on the surface collection and archival information, site 41DT211 was occupied by unknown tenants from as early as 1936. There is no archaeological evidence for earlier historic occupations. A historic dwelling is shown in the general location of site 41DT211 on the 1941 and 1951 highway maps for Delta County. The structure is not shown on the 1964 USGS map. The single prehistoric flake is not sufficient evidence for a substantial prehistoric use of the site. The site is classified as Category III because it has low potential to address the material culture and settlement questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT212

This newly recorded historic site (Figure 8-123) is located on a north-trending ridge, outside of the reservoir on private property. The site was recorded since it is adjacent to the project area, and information was provided on the previous occupants by local informants. It lies on the south side of FM 1528, 575 m (1,866 ft) west of Johns Creek and 1.1 km (0.7 mi) northeast of Klondike. Elevation at the site ranges between 140 m and 141 m (460 ft and 462 ft) above msl. The mapped soil type is Annona loam. In its native state, this was an upland prairie with post oak savannah slope forest. A floodplain forest was to the east.

Stratigraphy

The single soil stratum identified at site 41DT212 is a dark grayish brown (10YR4/2) loam. It is the surface soil horizon and the modern plow zone. All cultural materials at the site are assumed to be derived from this stratum.

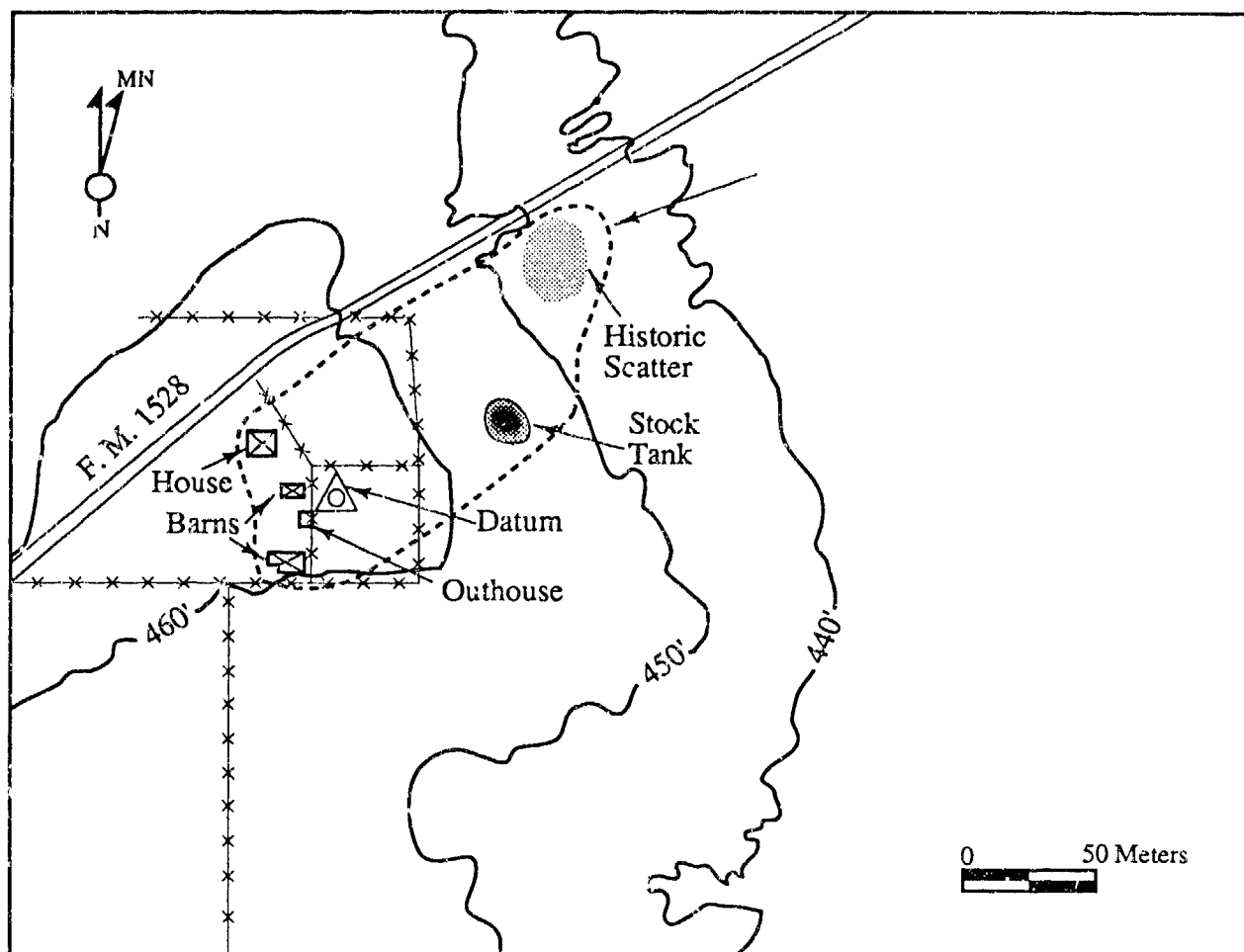


Figure 8-123. Plan of site 41DT212, showing locations of site limits (as defined by surface artifacts and features), site datum, and land disturbances.

Archival Information

According to local informants, the house at this site was occupied by Pete Gantt, now deceased. Mr. Gantt was a long-time resident of Klondike. One informant, who is 60-70 years old, indicates the house has stood since his childhood. The presence of manganese glass (ca. 1890-1910) at the site supports the dating of the site to at least the early twentieth century.

A corral, livestock chute, and stock tanks located between the site and Johns Creek appear to be more recent, but may be part of the historic farmstead. These farm-related structures are less than 50 years old, and are within the project boundaries.

Archaeological Investigations

Fieldwork conducted at the site was limited to close interval (5 m) pedestrian reconnaissance along the CE fence. Since the property does not belong to the government and the site is not within the Delivery Order Number 7 work area, no shovel tests were excavated, and the work was limited to brief survey.

A dwelling, two barns, and an outhouse comprise the central core of the site which covers 3,000 m². Stock tanks are located beyond the farm yard (see Figure 8-123). No artifacts or cultural features were noted within the Delivery Order Number 7 study area proper. A road, within the CE project area had modern garbage dumped at

its junction with FM 1528, but this debris does not relate to the occupation of site 41DT212.

The artifact assemblage collected from the ground surface at 41DT212 consists of seven items, including five stonewares and two manganese solarized bottle glass fragments. The stonewares date between 1890 and 1930. The manganese solarized bottle glass dates ca. 1880-1920.

Recommendations

Site 41DT212 is neither within the Delivery Order Number 7 study area nor the Cooper Lake project area. It is classified as Category III. If future information is found or project boundaries shift and warrant additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT213

This newly recorded historic site (Figure 8-124) is located on the southern end of a wooded area near the 137 m (450 ft) above msl contour. The Middle Sulphur River is 840 m (2,755.2 ft) to the south. An unnamed intermittent drainage lies 335 m (1098.8 ft) to the west of the site. The site is 150 m (492 ft) west of the railroad bed. The mapped soil type is Annona loam. In its native state, this area was a slope forest consisting of mixed hardwoods with an adjacent floodplain forest to the south.

Stratigraphy

The single natural soil stratum identified at site 41DT21 is a dark grayish brown (10YR4/2) loam. It is the surface soil horizon and the modern plow zone. All cultural materials at the site are assumed to be derived from this stratum.

Archival Information

A road leading to the vicinity of site 41DT213 is detailed in the 1914 map of the area, but no house is shown. The WPA files for this tract (J. Duvall; A-99) are unavailable. A house, isolated at the end of a 1.6 km (1 mi) long road,

was shown at this location on the 1941 highway map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The site consists of a series of features and a scatter of historic artifacts within a 1,500 m² (16,146 ft²) area. Site components noted during the pedestrian survey include a cistern lined with machine-made brick, a collapsed structure, a possible storm cellar 15 m east of the structure, and many large posts (see Figure 8-124). A stock pond is present 35 m west of the structure.

The artifact assemblage recovered from the ground surface at 41DT213 consists of one stoneware, one bottle glass fragment, and one wire nail. The stoneware is dated ca. 1890-1930.

Recommendations

A house is shown at this location on the 1941 map of the area. Site occupation dates from the early to mid-twentieth century. Due to the recent age of these materials, the site is judged to be clearly not eligible (Category III) for the National Register. This site type is the most abundant one represented in the Cooper Lake study area. Further investigations would, in all likelihood, provide redundant information. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT215

This newly recorded historic site (Figure 8-125) is located at the southeast corner of an intersection of FM 1880 and an unnamed dirt road, 1.32 km (0.82 mi) south of the former Liberty Grove Cemetery.

Elevation at the site is 133 m (435 ft) above msl, and the mapped soil type for the site is Normangee clay loam. In its native state, this

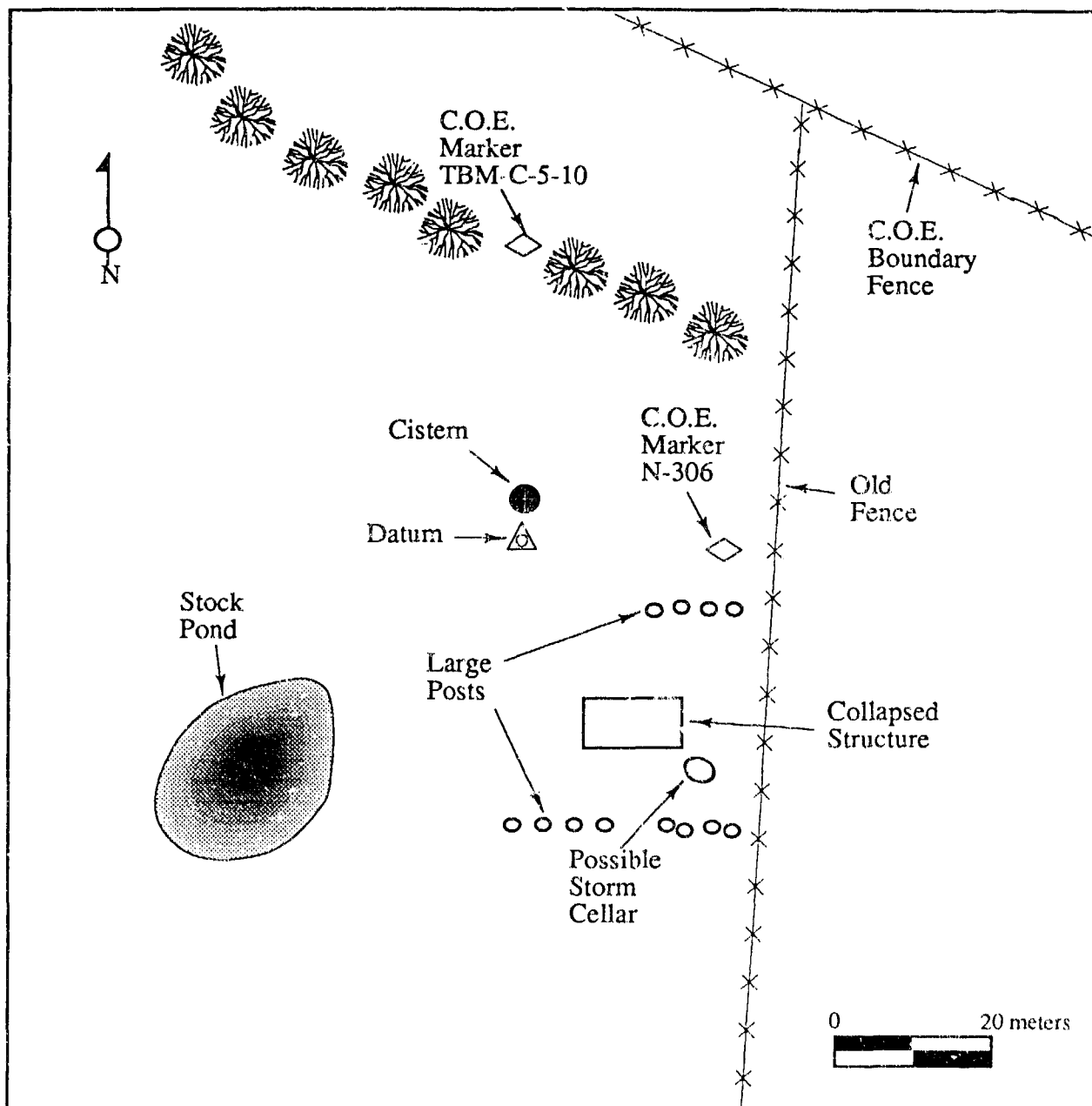


Figure 8-124. Plan of site 41DT213, showing locations of site datum and surface features.

area was an upland prairie. Site 41DT215 has been intensively cultivated in the past.

Stratigraphy

Three natural soil strata were exposed by intensive erosion at site 41DT215. Stratum I is a B soil horizon. It is a yellowish brown (10YR5/2) clay. Its gradual, wavy upper boundary occurs at 40 cm below surface, and the stratum extends to

an average depth of 70 cm below ground surface. Stratum I is culturally sterile.

Stratum II is the upper E soil horizon. It is brown (10YR4/3) in color, and its clear, wavy upper boundary occurs at 17 cm below ground surface. Stratum II is culturally sterile.

Stratum III, the surface soil horizon, is the modern plow zone. It has been removed over 50% of the site area by erosion. All cultural materials at the site were derived from this stratum.

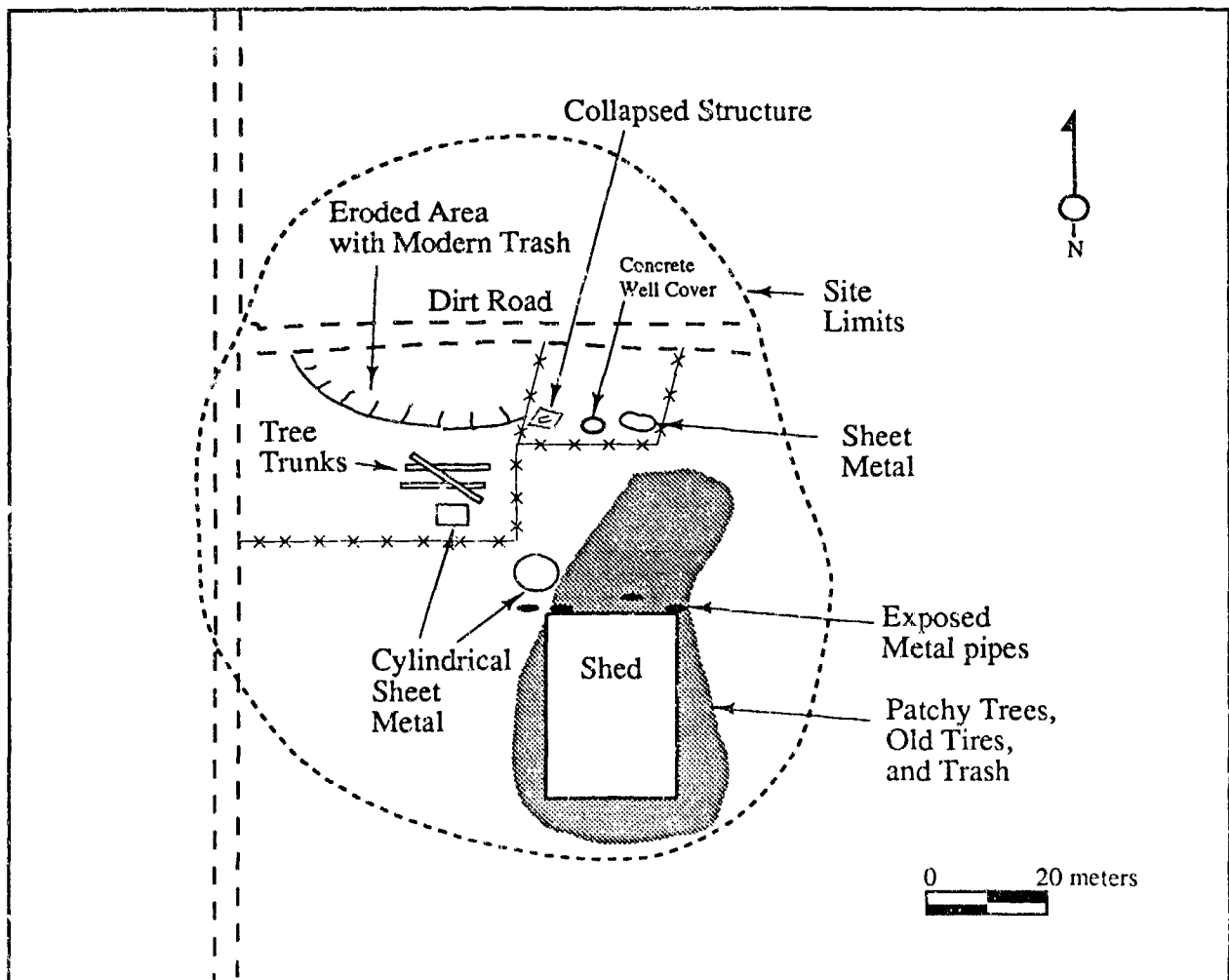


Figure 8-125. Plan of site 41DT215, showing location of site limits (as defined by surface artifacts and features) and land disturbances.

Archival Information

Site 41DT215 (along with site 41DT236) is located within the J. Zunega Survey (A-411), which was a 741.4 ha (1,832 acre) grant patented to John Gregg on 11 May 1857 (Delta County Deed Book 2-H: 191). In 1936, this site was situated at the junction of three tracts belonging to H. H. Hagood, J. W. Maynard, and Mrs. A. P. Miller. Mr. H. H. Hagood lived in Cooper and his 17 ha (42 acre) tract was occupied by tenants, with 11.3 ha (28 acres) in cotton and 3.2 ha (8 acres) in grain. J. W. Maynard lived on a 36.8 ha (91 acre) tract to the south of 41DT236, and his tenant worked the 29.5 ha (73 acre) tract adjacent to site 41DT215 (including site 41DT236). Twenty ha

(50 acres) were in cotton and 4.8 ha (12 acres) were in grain. A 24 ft x 32 ft residence was present on this tract. Mrs. A. P. Miller lived in Cooper and her tenants worked this 263 ha (650 acre) farm. Six dwellings are listed for this property in 1936. In all, 141 ha (348 acres) were in cotton, and 61 ha (150 acres) were in grain.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to their age.

The total site area is estimated at 2,500 m² (26,910 ft²). A collapsed house is present at the site, 35 m east of FM 1880. A concrete slab, which may be covering a well or privy, is located north of the house (see Figure 8-125). Two sheet metal cylinders are located to the west and south of the house. A solitary metal pipe (possibly a sewer pipe) protrudes from the ground surface 25 m south of the house.

The historic artifact assemblage recovered from the ground surface consists of nine items: four refined earthenwares, one stoneware, two bottle glass fragments, one iron fragment, and one stove part. The ironstone whitewares date ca. 1890-1910, and the stoneware dates ca. 1890-1930. The manganese bottle glass dates between 1890 and 1920. One clear glass pickle jar with continuous threads (made via automated bottling machine) dates ca. 1910- present. More recent refuse is scattered over the site.

Recommendations

The site is thought to have been occupied from the early to late twentieth century. It is considered to be clearly not eligible (Category III) for nomination to the National Register. Further investigations would, in all likelihood, provide redundant information relative to the historic research questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT216

This newly recorded historic site (Figure 8-126; see Figure 8-119) is located 1.56 km (0.97 mi) southwest of the old Liberty Grove Cemetery, near the intersection of two dirt roads, 1.9 km (1.2 mi) north of Johns Creek. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Wilson silt loam. In its native state, this was an upland prairie.

Stratigraphy

The single soil stratum identified at site 41DT216 is a very dark gray (10YR3/1) clay. It is

the modern plow zone. All cultural materials at the site were derived from this stratum.

Archival Information

Site 41DT216 is located on the E. McIntire (S-18) land tract. Although McIntire claimed this as a homestead on 26 April 1858, as witnessed by two individuals listed as Ewing and Rattan, the General Land Office files in Austin indicate that this was a forfeited grant. It was subsequently patented by J. A. Grant, a local surveyor and possible land speculator, on 18 May 1858. Based on the material culture and features at the site, this homestead is not the same as 41DT216. A house is shown at the location of site 41DT216 on the 1941 highway map. No house is shown at the 41DT217 location on the 1941 highway map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 20 cm) excavated as the site datum was culturally sterile.

The site area is 1,800 m² (19,375 ft²). A collapsed and burned house and associated brick lined cistern are present at the site (see Figures 8-111 and 8-118). The cistern is made of Diamond bricks. The artifact scatter around the house includes both handmade and machine-made bricks. The collapsed remains of a small outbuilding are located northeast of the cistern. A stock pond is also present at the site.

The historic artifact assemblage collected from the ground surface at site 41DT216 consists of 82 items, including 32 refined earthenwares, 35 stonewares, 10 bottle glass fragments, one piece of table glass, one bolt, and three fragments of melted lead(?). One floral porcelain dates ca. 1895-1950, and other whitewares date 1890 to the present. All stonewares date ca. 1890-1930; one is poorly fired with splotchy glazes. The manganese solarized bottle glass fragment dates between 1880 and 1920. One "Illinois" bottle glass fragment recovered from the site locus dates 1916-1929.

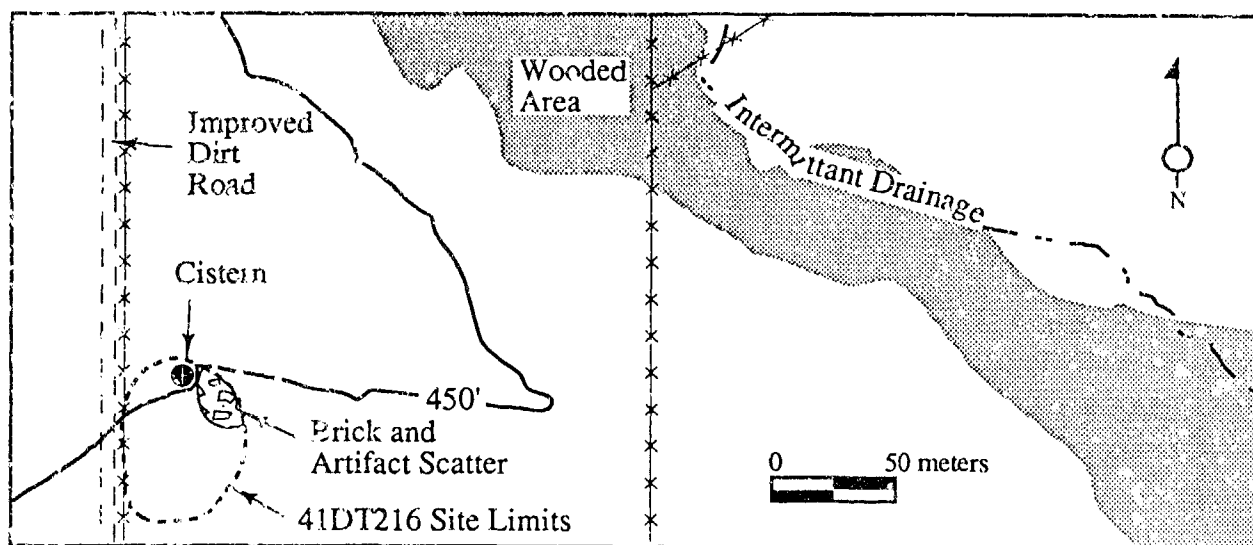


Figure 8-126. Plan of site 41DT216, showing site limits as defined by surface artifacts and features.

Recommendations

Occupation of the site is dated from the late nineteenth to mid-twentieth centuries. The artifact assemblage recovered from site 41DT216 is quite varied. Further information may be necessary to determine whether this site has the potential to yield any important information on the historic material culture and settlement questions outlined in the Research Design. The site is classified as Category II, and further work is recommended.

Site 41DT217

This newly recorded historic site (Figure 8-127; see Figure 8-119) is located 50 m (164 ft) northwest of an intermittent tributary of the South Sulphur River and 2 km (1.2 mi) east of Johns Creek. The site is immediately south of an unnamed dirt road, 1.25 km (0.78 mi) west of the old Liberty Grove Cemetery. Elevation is 137 m (450 ft) above msl, and the mapped soil type is Crockett loam. Site 41DT206 lies 100 m (328 ft) to the east. A large stock pond lies 50 m (164 ft) east of the site. In its native state, this area was a post oak savannah. It has been cleared, intensively cultivated, and is presently in fallow pasture.

Stratigraphy

Two natural soil strata are present within the

Crockett soil series, within which the historic deposits at site 41DT217 have accumulated. Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt wavy boundary at 18 cm below surface. The stratum extends to an average depth of 40 cm below ground surface. Historic artifacts from the site are generally confined to the upper 5-10 cm of this stratum.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. The majority of artifacts at site 41DT217 are assumed to be derived from this stratum.

Archival Information

Site 41DT217 (along with sites 41DT206 and 41DT216) is located in the E. McIntire Survey (S-18). Houses are shown at the approximate locations of sites 41DT206 and 41DT216 on the 1941 highway map, but no structures are shown for site 41DT217. Local informants did not identify any of the previous occupants of this site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

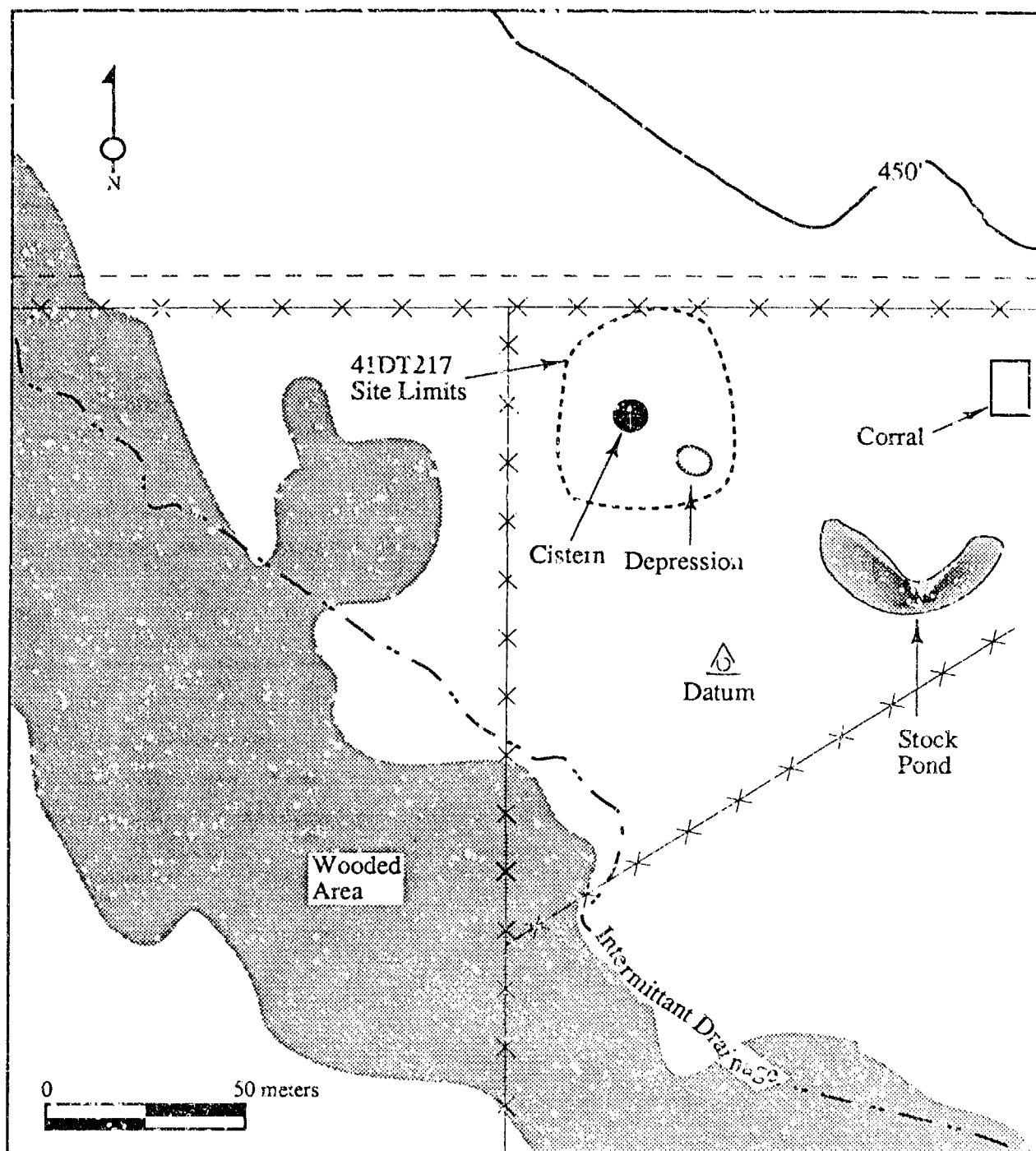


Figure 8-127. Plan of site 4!DT217, showing locations of site limits (as defined by surface artifacts and features), site datum, and land disturbances.

The total site area is 2,500 m² (26,910 ft²). Features noted at the site during pedestrian survey include a brick-lined cistern on the southeastern corner of the site (see Figures 8-119 and 8-127). A small depression, possibly the remains of a

storm cellar, is located just south of the cistern. Diamond bricks were observed in this feature. No remains of buildings were noted, but structures may have been bulldozed.

The historic artifact assemblage recovered

from the ground surface at site 41DT217 consists of seven items, including three refined earthenwares and four bottle glass fragments. One pure whiteware with a green maker's mark (Made in the U.S.A.?) dates from 1890 to the present. Three clear bottle glass fragments made by an automated bottling machine date between 1910 and the present.

Recommendations

The site is thought to have been occupied from the early to mid-twentieth century. Based on the destruction of structural remains and recent age, the site is judged to be clearly not eligible (Category III) for the National Register. Since this property type is the most common in Cooper Lake, further investigations, in all likelihood, would yield redundant information relative to the material culture and settlement questions outlined

in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT218

This newly recorded historic site (Figure 8-128) is located in a slope/upland setting 1.04 km (0.65 mi) south of Liberty Grove and 960 m (3,148.8 ft) northeast of Johns Creek. Elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this area was an upland prairie.

Stratigraphy

A single soil stratum was identified at site 41DT218. This is the surface soil horizon (Ap) of

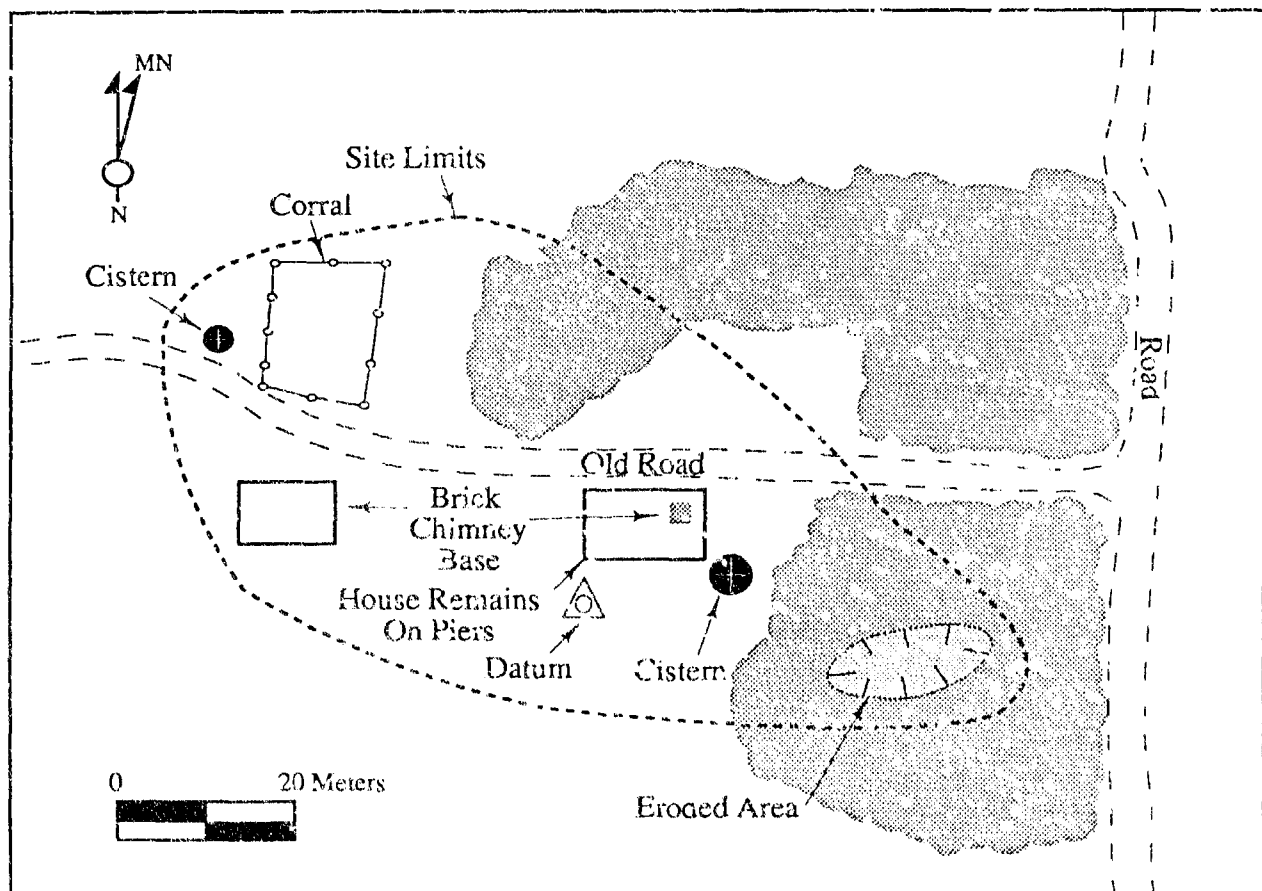


Figure 8-128. Plan of site 41DT218, showing locations of site limits (as defined by surface artifacts and features), site datum, and land disturbances.

the Normangee clay loam. It is a dark brown (10YR2/3) clay loam with an average depth of 0-18 cm below ground surface. All historic artifacts are assumed to derive from this stratum.

Archival Information

Site 41DT218 (along with site 41DT219) is located on a 64.8 ha (160 acre) tract granted to the heirs of R. D. Spain on 21 May 1870 for his service and death in the Texas Revolution (Miller 1967: 609). In 1936, this entire tract was owned by Mrs. P. W. Miller, who obtained the property in 1926 for \$5,600 (Delta County Deed Book 59: 125). In 1936, the property was valued at \$1,700. Mrs. Miller rented the property to tenants. A 32 ft x 30 ft dwelling and a 20 ft x 30 ft barn were present. The home rested on 0.8 ha (2 acres), 47.8 ha (118 acres) were in cultivation (all cotton), 2 ha (5 acres) were wasteland, 10 ha (25 acres) were in pasture, and 4 ha (10 acres) were in meadow. At that time, 8.1 ha (20 acres) were in need of terracing. A house is shown at this general location on the 1914 Levee Improvement District Map, the 1941 highway map, and the 1964 USGS map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. As the site and its boundaries were evident from surface materials, these remains were mapped and assessed as to their age.

The site area is 9,000 m² (2.2 acres). A commercial brick (Texas) cistern is located on the western edge of the site, near a modern corral (see Figure 8-128). This was probably used to water livestock. Another commercial brick (Texas) cistern is located 35 m east of the cistern. The remains of a house with a brick chimney base are located 5 m north of this cistern. This house is thought to be less than 50 years old and has been burned.

The historic artifact assemblage collected from the ground surface at site 41DT218 consists of 22 items, including a fragment of refined earthenware, eight stonewares, 11 pieces of bottle glass, one wire nail, and a screen door handle.

Recommendations

Occupation of the site is known to date from as early as 1914. Archival and informant researches indicate serial use and occupancy since the 1920s, thus making the socio-economic and ethnic differentiation of the site occupations difficult. The site is considered to be clearly not eligible for nomination to the National Register (Category III). If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT219

This newly recorded historic site (Figure 8-129) is located 1.97 km (1.2 mi) west of FM 1880 and 120 m (393.6 ft) north of Johns Creek. Elevation at the site is 131 m (430 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was a slope forest with mixed hardwoods. A floodplain forest was located to the south and an upland prairie to the north.

Stratigraphy

Two natural soil strata (described for the Crockett loam soil series) were identified at the site. Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt, wavy upper boundary at 20 cm below surface. It extends to an average depth of 43 cm below ground surface. Historic materials are rare in this soil horizon, but some metallic items have been noted on sites that occur on this mapped soil series.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark, grayish brown (10YR3/2) loam. All historic materials at site 41DT219 are assumed to be derived from this stratum.

Archival Information

Site 41DT219 (along with site 41DT218) is located on a 64.8 ha (160 acre) tract granted to the heirs of R. D. Spain on 21 May 1870 for his service and death in the Texas Revolution (Miller 1967: 609). In 1936, this entire tract was owned by Mrs. P. W. Miller, who obtained the property in

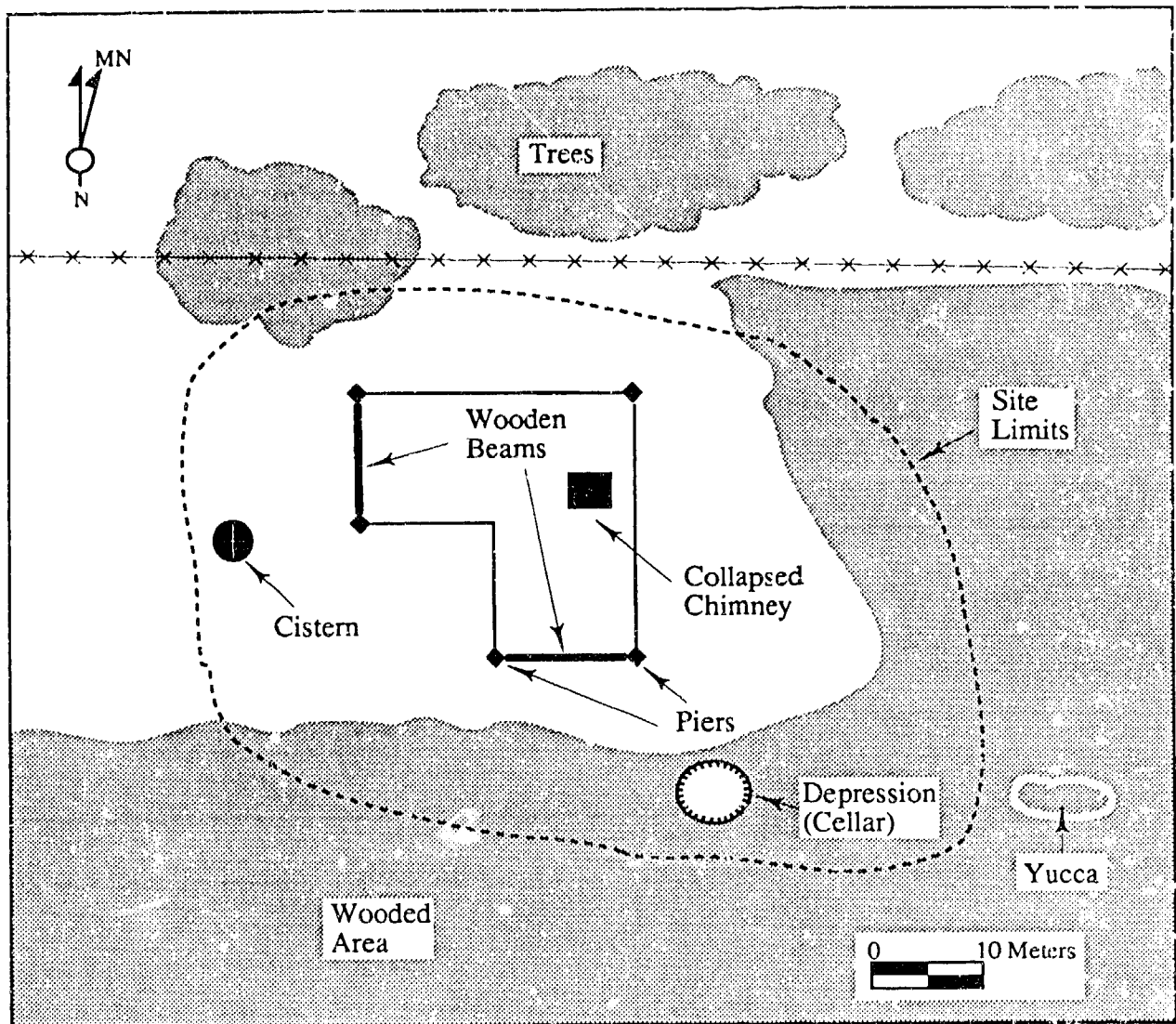


Figure 8-129. Plan of site 41DT219, showing site limits as defined by surface artifacts and features.

1926 for \$5,600 (Delta County Deed Book). In 1936, the property was valued at \$1,700. Mrs. Miller rented the property to tenants. A 32 ft x 36 ft dwelling and a 20 ft x 30 ft barn were present. The home rested on 0.8 ha (2 acres), 47.8 ha (118 acres) were in cultivation (all cotton), 2 ha (5 acres) were wasteland, 10 ha (25 acres) were in pasture, and 4 ha (10 acres) were in meadow. At that time 8.1 ha (20 acres) were in need of terracing.

None of these structures match the archaeological features of site 41DT219. A structure is shown on the 1941 highway map in the vicinity of site 41DT219.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The total site size is estimated to be 2,000 m² (21,528 ft²). A collapsed house is present at the site (see Figure 8-129). The base of a brick (machine-made) chimney is visible in the ruins. A cistern lined with Palmer bricks (machine-made, manufactured ca. 1902-1929) is located west of

the house. A small depression, which may have been a storm cellar, is located southeast of the house. No collections were made since all non-architectural artifacts were under 50 years old.

Recommendations

The site is thought to date to the mid-twentieth century and may be the remains of a sharecropper's shack. There was no evidence of a structure at this location prior to 1936. This site is considered clearly not eligible (Category III) for nomination to the National Register. Further investigations would in all likelihood produce redundant information relative to the historic settlement, material culture, and subsistence research questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT220

This newly recorded historic site (Figure 8-130) is located 1.68 km (1.04 mi) southwest of Klondike and 300 m (984 ft) east of the old railroad bed. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Wilson silt loam. In its native state, this area was an upland prairie adjacent to a slope forest.

Stratigraphy

Two natural soil strata were identified at site 41DT220. Stratum I is the upper B soil horizon. It is a very dark gray (10YR3/1) clay with an abrupt, wavy upper boundary at 13 cm below ground surface. It extends to an average depth of 56 cm below ground surface. Cultural materials are confined to the upper 10 cm of this stratum.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark gray

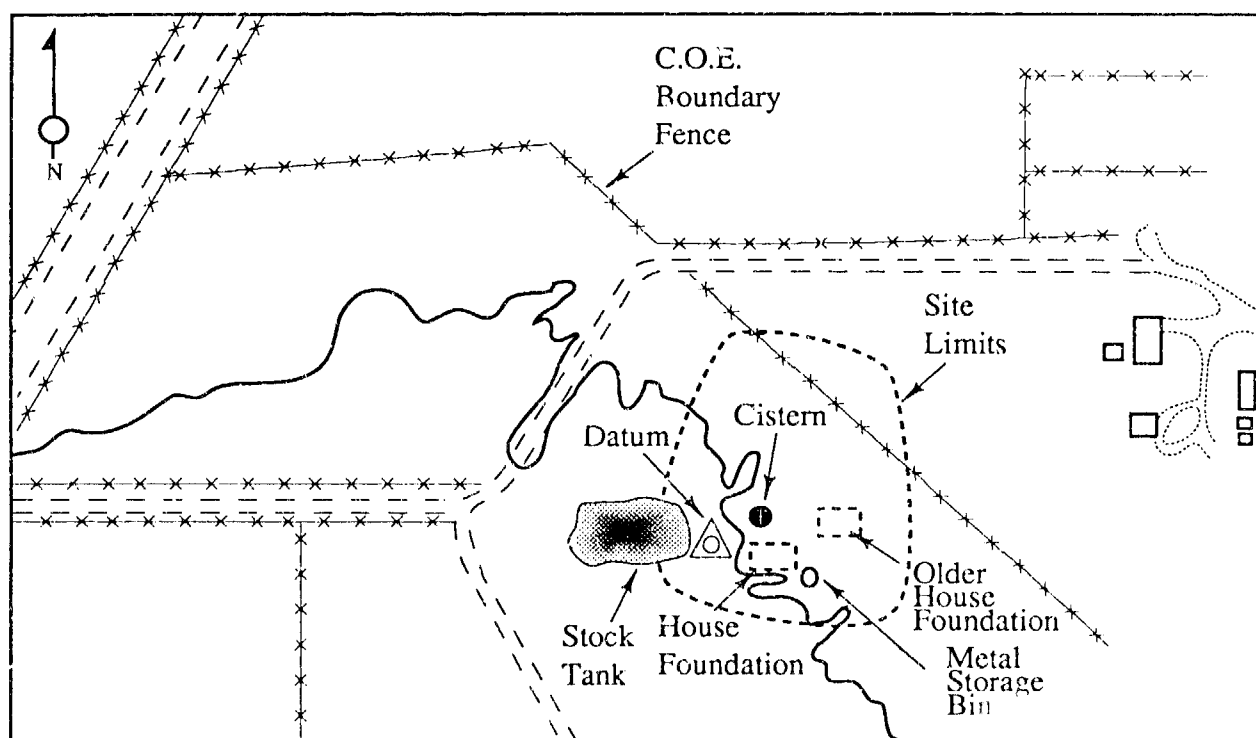


Figure 8-130. Plan of site 41DT220, showing locations of site limits (as defined by surface artifacts and features), site datum, and land disturbances.

(10YR3/1) clay loam. The majority of historic artifacts are derived from this stratum.

Archival Information

Site 41DT220 (along with site 41DT185) is located on the J. W. Bills (A-37) Survey. This survey was a 128.3 ha (317 acre) grant. The patent for this tract was not present in the Delta County Courthouse during the present investigations, nor was it located in 1936. In 1936, site 41DT220 was located on a 6.9 ha (17 acre) tract which belonged to I. T. Hooten of Klondike, who resided on or operated the farm. At that time 0.4 ha (1 acre) was reserved for the house, 0.4 ha (1 acre) for the garden, 3.6 ha (9 acres) were in cultivation, 2 ha (5 acres) were in pasture, and 0.4 ha (1 acre) was wasteland. Mr. Hooten obtained the property in 1905 for \$500 (Delta County Deed Book 13: 186). In 1936, its value had depreciated to \$300. A house was shown at the location of site 41DT220 on the 1941 highway map. On the 1964 USGS map, a multiple structure farm complex with a dwelling is shown.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (25 x 25 x 20 cm) was excavated and used for this site datum.

The total site area is 6,400 m² (1.6 acres). Features present at the site indicate that two houses once stood there. In the northern part of the site, wooden piers and beams indicate the location of what is thought to be the older house (see Figure 8-130). Concrete slabs are present at both the east and west ends of the structure, probably representing porches. A cistern lined with machine-made brick is located near the southwestern corner of this house. The remains of a more recent house with a poured concrete foundation are located immediately south of the older house. The remains of a storm cellar are located ca. 20 m east of this house. Recent refuse and demolition debris are scattered over the site, but none were collected.

Recommendations

A house was present at this location in 1936 and another more recently, which remained until the 1970s. Occupation of the site dates from the early to late twentieth century. Later occupation of the site has severely impacted the older component at the site, which was the I. T. Hooten occupation (ca. 1905-1936 and later). This site is considered to be clearly not eligible (Category III) for nomination to the National Register. Further investigations at site 41DT220 would in all likelihood yield redundant information in relation to the historic material culture, chronological, and settlement questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT221

This newly recorded historic site (Figure 8-131) is located in a slope/upland setting on the north side of a dirt road, 330 m (1,082.4 ft) east of the road intersection of the Free Hope Church site. The town of Klondike lies 2 km (1.2 mi) to the west. Elevation at the site is 136 m (446 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was an upland prairie with an adjacent slope forest consisting of mixed hardwoods.

Stratigraphy

A single natural stratum was identified at site 41DT221. This very dark grayish brown (10YR3/2) loam is the modern plow zone. It extends to an average depth of 20 cm below ground surface. All cultural materials at site 41DT221 were derived from this stratum.

Archival Information

A house is shown at this location on the 1941 map of the area. Informant Jeff Blandon indicated that two dwellings were present in this area and were occupied by Joseph Blandon and Mitty Orange. In 1936, a 1.2 ha (3 acre) tract was listed to an African American, Mattie Mines, who is

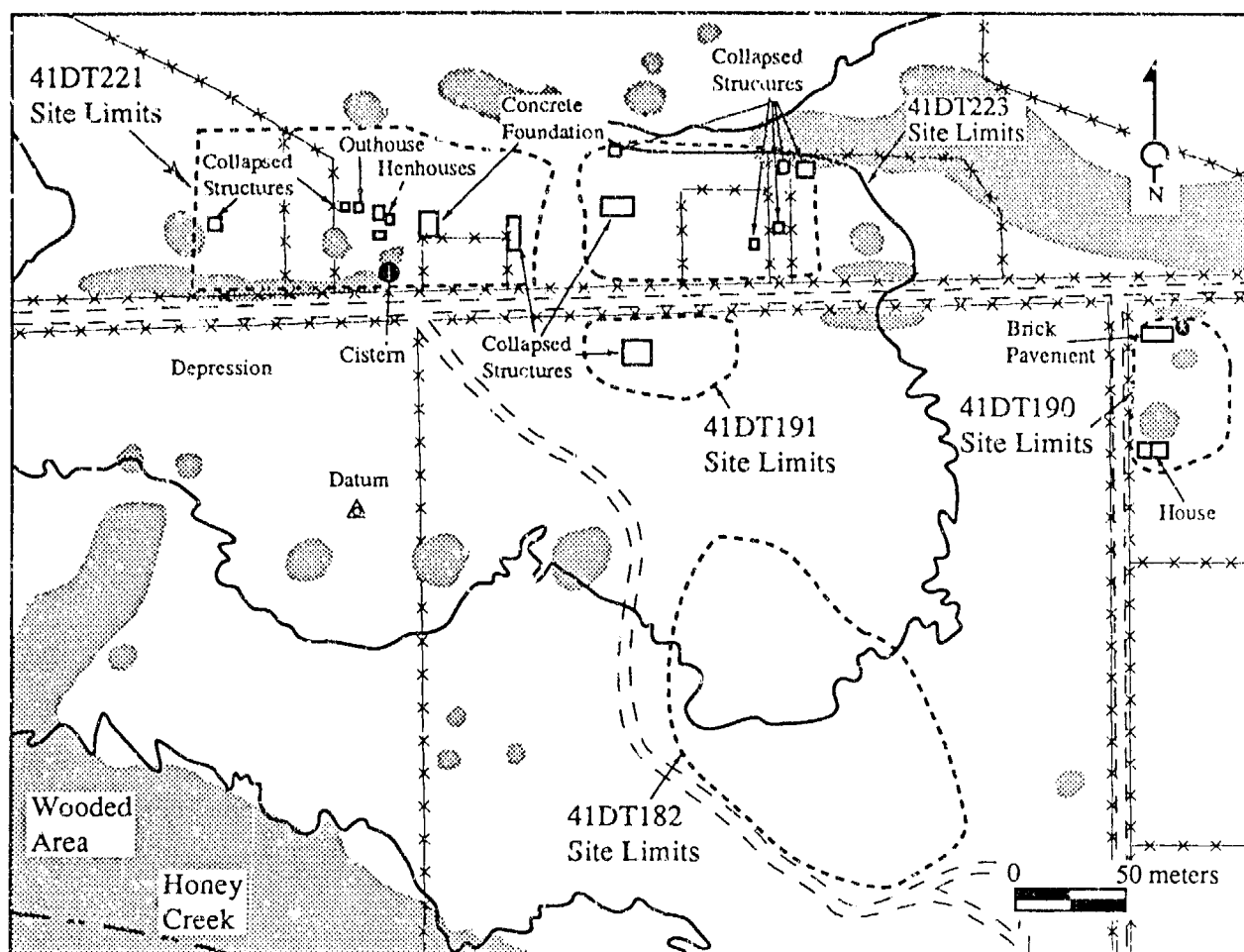


Figure 8-131. Plan of site 41DT221 and adjacent sites 41DT182, 41DT190, 41DT191, and 41DT223, showing locations of site limits and surface features.

possibly the "Mitty Orange" reported by Jeff Blandon (see Chapter 7). She obtained the property in 1929 for \$10 (Delta County Deed Book 66: 512). This was the only property noted in the WPA survey which had appreciated in value to \$30 in 1936. Mattie Mines leased the pasture for cash. No house is known from the site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The total site size is 7,000 m² (1.7 acres). Many features are present at the site. A poured

concrete foundation measuring 14 m x 8 m is located in the eastern part of the site (see Figure 8-131). A cistern lined with machine-made brick is located southeast of the foundation. A poured concrete outhouse base is located north of the foundation. Four possible hen houses or sheds are situated west of the foundation, and there are two depressions in this part of the site. There is also a collapsed corral, located west of the outbuildings. The collapsed remains of a barn measuring 14 m x 7 m are located on the western portion of the site. Only modern refuse was observed at the site, and no artifacts were collected.

Recommendations

Occupation of the site dates from early to late twentieth century. Although African Americans

were known to have occupied this site (possibly in two dwellings), subsequent land modifications have altered its archaeological integrity. The site is considered to be not eligible (Category III) for nomination to the National Register. Also, due to the 1960s and 1970s occupations, further investigations would in all likelihood yield redundant information on twentieth century settlement and material culture. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT222

This newly recorded historic site (Figure 8-132) is located just north of a dirt road, 840 m (2,755.2 ft) east of the Free Hope Church site and 2.2 km (1.4 mi) southeast of Klondike. Elevation at the site is 134.7 m (442 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was an upland prairie with adjacent slope forest consisting of mixed hardwoods.

Stratigraphy

A single natural soil stratum was identified at site 41DT222. This very dark grayish brown (10YR3/2) loam is the modern plow zone. It extends to an average depth of 20 cm below ground surface. All cultural materials at site 41DT222 were derived from this stratum.

Archival Information

Informant interviews indicate at least two individuals who lived at this site. It was described as the B. J. Jones house. Also, Hart and Beulah Andrews, who died in 1965 and 1974, respectively, were mentioned as previous occupants. In addition, this site was temporarily occupied by Fred Baker. In 1936, Mrs. F. R. Baker (listed in 1936 as "colored") obtained the 18.2 ha (45 acre) tract in 1889 (Delta County Deed Book V: 536) and leased it to tenants. The one-story, seven-room dwelling on this property measured 40 ft x 44 ft. In the 1930s, 0.4 ha (1 acre) was reserved for the home, 0.4 ha (1 acre)

for the garden, 8.1 ha (20 acres) were in cotton, and 9.3 ha (23 acres) were in pasture. The farm badly needed terracing and was characterized as "sandy wash out." A house was shown at this location on the 1914 Levee Improvement District Map.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. The single shovel test excavated for the permanent datum was culturally sterile. No A-horizon was present in this unit.

The total site area is 1,500 m² (16,146 ft²). The collapsed remains of a wooden plank structure, possibly a house, are present 20 m north of the dirt road (see Figure 8-132). Dimensions of this structure are 9 m x 8 m. Two large, 5 m diameter depressions are located 10 m north of the structure, and may be collapsed cisterns. Support posts for an outbuilding and a 1 m² concrete and brick pavement are located 15 m northwest of these depressions. No artifacts were collected from the site since no materials older than 50 years were noted.

Recommendations

Site occupation dates from the early to mid-twentieth century. Site 41DT222 was occupied by several African American families. The material remains could potentially provide information on ethnic settlement patterns and material culture dating ca. 1950s-1970s. However, it is probable that the serial occupations reported for the site will inhibit isolation of individual households dating to the original landowners in the late nineteenth century. This site is considered to be clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

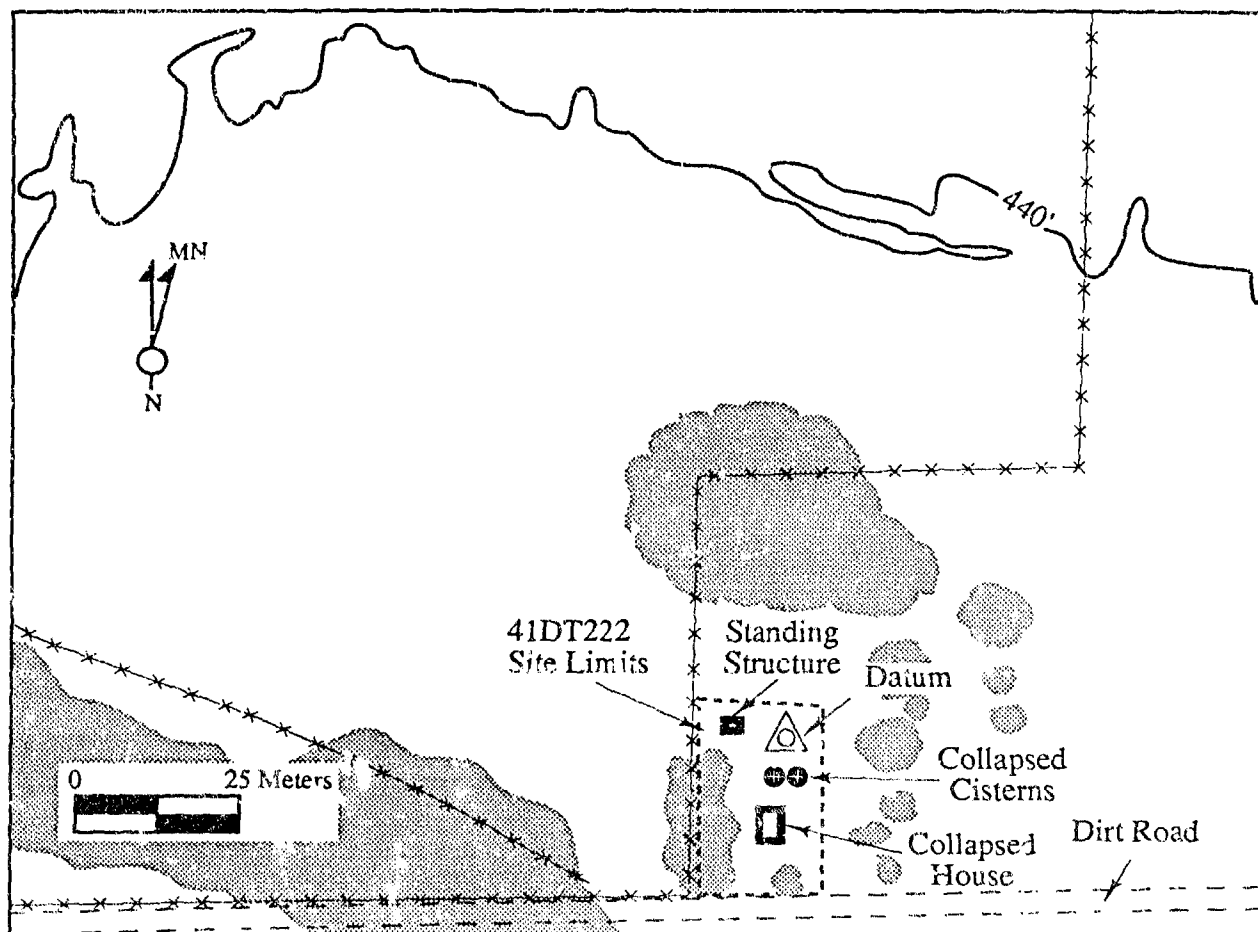


Figure 8-132. Plan of site 41DT222, showing site limits as defined by surface artifacts and features.

Site 41DT223

This newly recorded historic site (see Figure 8-131) is located on upland pasture between the Free Hope Church Road and an east-trending drainage channel. Honey Creek flows 425 m (1,394 ft) to the south. The site is on the north side of a dirt road, 470 m (1,541.6 ft) east of the Free Hope Church site and 2.07 km (1.29 mi) southeast of Klondike. Elevation at the site is 135.6 m (445 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was an upland prairie with adjacent slope forest consisting of mixed hardwoods.

Stratigraphy

A single natural soil stratum was identified at site 41DT223. This very dark grayish brown (10YR3/2) loam is the modern plow zone. It

extends to an average depth of 20 cm below ground surface. All cultural materials at 41DT223 were derived from this stratum.

Archival Information

The site is part of the Friendship community. A house is shown in this vicinity on both the 1914 and 1941 maps. Informants were unable to provide information on the previous occupations of this site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

Total site size is 7,500 m² (1.9 acres). Structural remains noted include a cistern lined with machine-made brick, situated on the eastern edge of the site (see Figure 8-131). The remains of two wooden plank structures, which may have been hen houses, are located north of the cistern. West of the cistern, a rectangular storm cellar with a wood and metal roof is visible. The ruins of another small outbuilding are located southwest of the cistern, and a collapsed barn is present northwest of the cistern. Galvanized sheet metal washtubs and a kerosene stove were noted at the site. No artifacts were collected since all observed cultural materials were less than 50 years old.

Recommendations

The site is thought to have been occupied from the early to mid-twentieth century. Archival and informant researches do not indicate any historical significance for this property. Recent occupations have altered the site's archaeological integrity, and hence the site has low potential to address the historic material culture, settlement, and chronological research questions outlined in the Research Design. The site is deemed not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT224

This site (Figure 8-133) is located on upland prairie in an open field along a fence line south of the Old Jefferson-Bonham Road. Doctors Creek flows 500 m (1,640 ft) from the site. The site lies at an elevation of 134 m (440 ft) above msl on a Wilson silt loam soil. In its native state, this area was an upland prairie.

Stratigraphy

Two natural soil strata were identified by auger and shovel probes at site 41DT224. These strata are discussed in order from the older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a very dark gray (10YR3/1) clay loam with an abrupt smooth upper boundary at 15

cm below surface. The stratum extends to an average depth of 22 cm below ground surface. Stratum I is culturally sterile.

Stratum II is a very dark gray (10YR3/1) silt loam. It is the surface soil horizon and has been intensively plowed in the past. All cultural materials recovered during the present investigations derive from this stratum.

Archival Information

Site 41DT224 is located within the Andrew B. Ewing Survey, a pre-exemption grant from Hopkins County which was surveyed by William Evans on 14 August 1854. The chain carriers were Andrew Ewing and Robert Hannah (see site 41DT126). This is in all likelihood the original homestead of Andrew B. Ewing.

The land grant was not patented until 1893 (Delta County Deed Book 9: 91). In 1936, site 41DT224 was located on a 13.4 ha (33 acre) tract owned by J. J. McKee of Cooper, who obtained the property for \$130 (Delta County Deed Book 15: 253). At that time 10 ha (25 acres) were in cotton and 3.2 ha (8 acres) were in pasture. McKee operated the farm himself. In 1936, the property had depreciated to \$240.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Site 41DT224 was revisited in the summer of 1990. Despite close interval reconnaissance, no additional surface artifacts were noted. A shovel test (35 cm x 35 cm x 15 cm) and an auger probe were excavated within the surface scatter, but both were sterile (see Figure 8-133). A low-density surface scatter spread over an area measuring 2,500 m² was noted during pedestrian survey.

The artifact assemblage collected from the ground surface at site 41DT224 consists of eight items: six refined earthenwares, one brown bottle glass fragment, and one handmade brick fragment. The refined earthenwares are hand-painted "Springware" (i.e., decorated with blueberries and green leaves similar to Davenport wares) dating from the 1840s to the 1870s. An alphabet plate dates ca. 1840s-1850s.

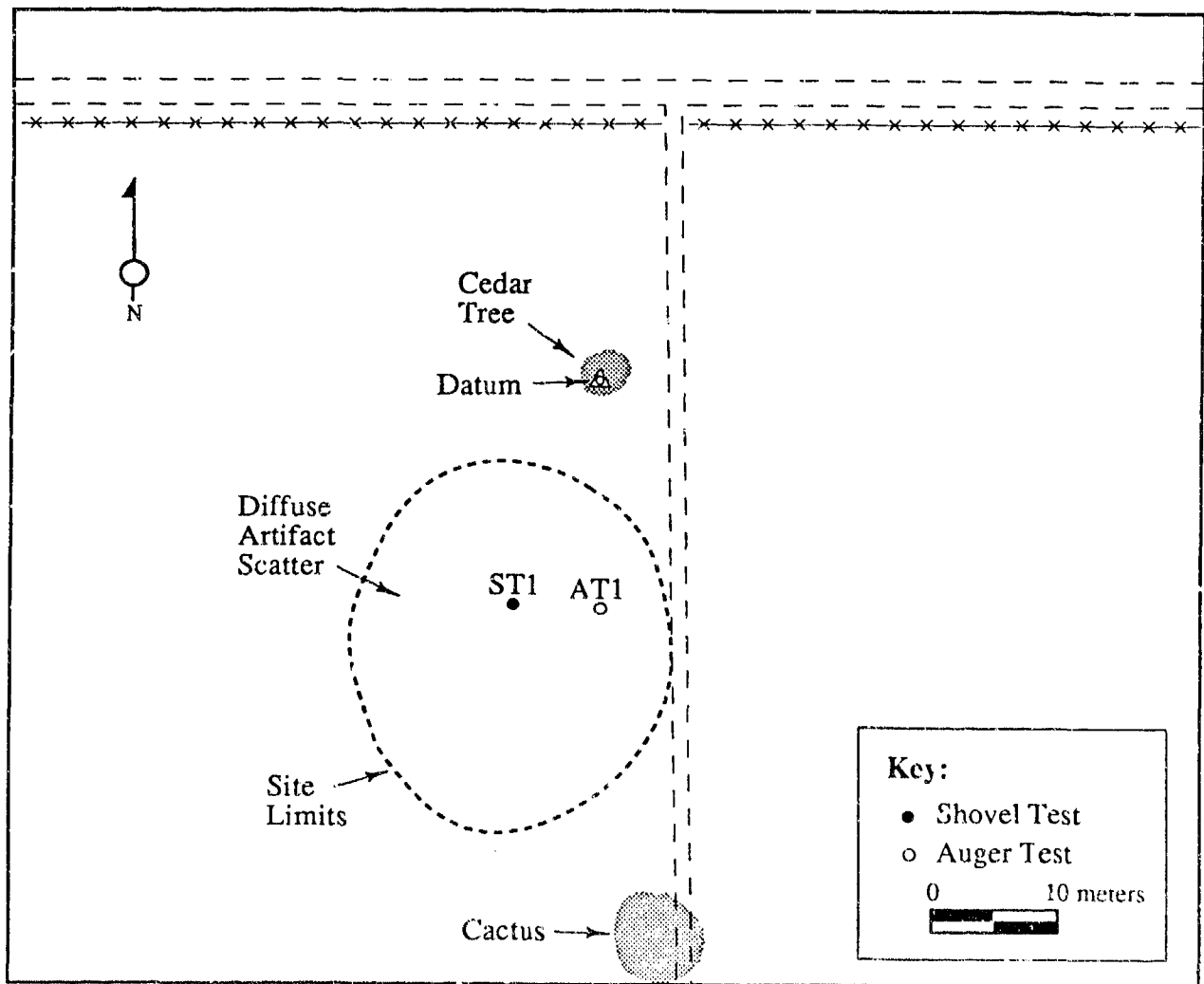


Figure 8-133. Plan of site 41DT224, showing locations of the shovel test, auger test, surface features, artifact scatter, and site limits.

Recommendations

The artifacts and extreme low density of cultural material noted at site 41DT224 suggest the remains of a short-term pre-Civil War farmstead. Archival information indicates that site 41DT224 has been intensively cultivated for over 80 years. Although surface evidence points to a short-term occupation, the density of surface artifacts is low. Additional investigations, including close interval (2 m grid) excavations or surface collections following plowing may be necessary to evaluate the archaeological integrity of this potentially NRHP-eligible (Category I) pre-Civil War homestead.

Site 41DT225

This newly recorded historic site (see Figure 8-100) is located on the west side of a dirt road, 1.9 km (1.2 mi) south of State Highway 24 and 620 m (2,033.6 ft) north of the railroad bridge over Jernigan Creek. Elevation at the site is 135 m (442 ft) above msl. The mapped soil type at the site is Wilson silt loam. In its native state, this area was an upland prairie.

Stratigraphy

The single soil stratum identified at site 41DT225 is a very dark gray (10YR3/1) clay

loam, which is the modern plow zone. It has a maximum depth of 13 cm below ground surface. All cultural materials are assumed to be from this stratum.

Archival Information

Site 41DT225 is located on the Samuel Kirk (A-212) Survey. The 1914 Levee Improvement District Map shows a road leading directly to the location of site 41DT225, but no house is shown. The WPA surveys were not available for this tract. A house is shown in this vicinity on the 1941 highway map. The 1951 aerial survey does not show any structures at this site, but a possible structural ruin or well and a stock tank are visible.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

A collapsed cistern is located near the dirt road and has a terra cotta pipe protruding above the ground surface (see Figure 8-100). A surface scatter of brick fragments and concrete was noted near the cistern. A stock pond is located 14 m west of the cistern. No other features or artifacts were observed at the site.

Recommendations

The occupation of site 41DT225 began ca. 1941. The site is considered to be clearly not eligible (Category III) for nomination to the National Register. There is no indication that this is a Domestic site, and it may be simply a ranching facility. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT226

This newly recorded historic site (Figure 8-134) is located in a slope/upland setting 240 m (787.2 ft) west of the Old Friendship Church site

and 460 m (1,508.8 ft) southwest of the Free Hope Church site. Elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Crockett loam. The site is bisected by a dirt road. In its native state, this was an upland prairie adjacent to a slope forest consisting of mixed hardwoods.

Stratigraphy

Two natural soil strata were identified in eroded areas of the site and in examination of the road cut through the site. Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt wavy upper boundary at 20 cm below ground surface. It extends to an average depth of 43 cm below ground surface. Stratum I is culturally sterile.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. All historic materials at the site are derived from this stratum.

Archival Information

Informant interviews and the cemetery information (see site 41DT180, see Tables 8-18 and 8-19) shed light on the history of this property, which was reported to be the Crawford house. In Friendship Cemetery, a William (1889-1965) and Nellie (b. 1895) Crawford were listed. The latest of the other Crawfords is Louis, who was born in 1893 and died in 1959. Therefore, it appears that the range of occupation for the site by any Crawford family had to extend from the very late nineteenth century through the first half of the twentieth century.

A house is shown at this location on the 1914, 1936, and 1941 maps of the area. Additional informants report that this was the Jeff Blandon house site, before it was converted into a corral for livestock. Site 41DT226 is located on the William Kimble (A-208) Survey, which was granted in 1852 (Delta County Deed Book 1-4: 459). In 1936, site 41DT226 was located on a 20.5 ha (50.75 acre) tract which belonged to S. D. (Sampy?) English (African American). English obtained the property in 1930 for \$1. By 1936 the property was worth \$800. At that time 0.2 ha (0.5 acre) was reserved for a home, 0.2 ha (0.5 acre)

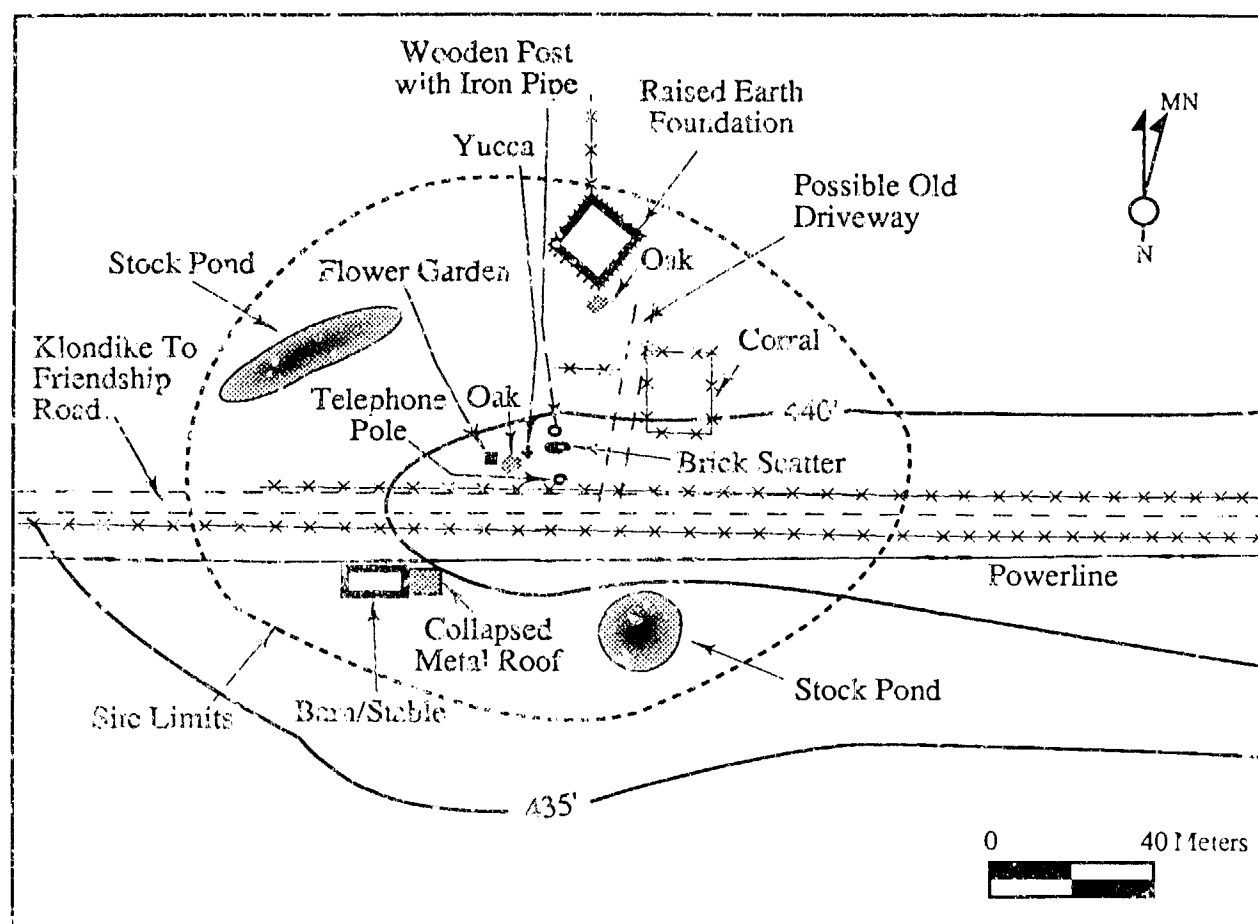


Figure 8-134. Plan of site 41DT226, showing locations of site limits (as defined by surface artifacts and features) and land disturbances.

for a garden, 16.5 ha (40.75 acres) were in cultivation (0.8 ha [2 acres] in grain and the remainder cotton), 2 ha (5 acres) were pasture, 1.2 ha (3 acres) were wasteland, and 0.4 ha (1 acre) was a meadow.

The house noted at site 41DT226 in 1936 was a one-story dwelling with six rooms and a flat (gambrel?) roof. The house measured 40 ft x 50 ft. It was built in 1915, prior to English's purchase or inheritance.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age (see Figure 8-134). Total site area is estimated at

14,100 m². A raised earthen mound, possibly the remains of a house foundation, is located 60 m north of the road. A corral is located 28 m southeast of the possible foundation, and a scatter of brick is located 40 m south of the possible foundation. A stock pond is located 25 m west of these features, and another is located immediately south of the dirt road. The remains of a partially standing barn are also located just south of the road, 30 m west of the stock tank. The artifact scatter at the site consists of modern glass bottles, bricks, sheet metal, and other household debris.

Recommendations

The serial occupations of the site date from the early to mid-twentieth century. The reuse of the site for ranching has severely altered the archaeological integrity. The site, therefore, is

considered clearly not eligible (Category III) for nomination to the National Register. The serial occupancy reduces its potential to address the ethnic, material culture, and chronological research questions outlined in the Research Design. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT227

This newly discovered prehistoric site (Figure 8-135) is located on the slope of an isolated remnant knoll 1.8 km (1.1 mi) west of Johns Creek and 3.3 km (2 mi) southeast of Klondike. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area consisted of a slope forest with an upland prairie to the northwest and a floodplain forest to the southeast.

Stratigraphy

Two natural soil strata were identified at site 41DT227. These are described in order from the older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt wavy boundary at 20 cm below ground surface. It extends to an average depth of 43 cm below ground surface. Stratum I is culturally sterile.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. All cultural materials are derived from this stratum.

Archival Information

Site 41DT227 (as with sites 41DT228, 41DT229, 41DT230, 41DT231, 41DT242, 41DT243, and 41DT244) is located on the B. N. Ball (A-254) Survey. This 331.9 ha (820 acre) grant was patented to Ball in 1860 (Delta County Deed Book 33: 345).

In 1936, site 41DT227 (along with site 41DT228) was located on a 37.6 ha (93 acre) tract owned by Mrs. T. J. Irwin, of Klondike. At that time, 0.4 ha (1 acre) was reserved for a home,

18.2 ha (45 acres) were in cultivation (4 ha [10 acres] in corn and 14.2 ha [35 acres] in cotton), 15 ha (37 acres) were in woodland, and 4 ha (10 acres) were wasteland. No additional information was provided on the house.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 26 m interval pedestrian survey, shovel testing, and mapping. Since the adjacent historic sites and their boundaries were evident from surface remains, these were mapped and assessed as to age. An extensive shovel testing program was conducted across the landform containing this site because it was considered a high priority for prehistoric settlement. Since the landform is a floodplain rise/terrace remnant, there appeared to be good potential for the presence of buried prehistoric and historic sites.

The site was discovered eroding out of a pasture road over a 30 m exposure. Fire-cracked rock ($n=15$; 106 g) and 14 flakes were collected from an eroded area (see Figure 8-135). The landform containing this site was intensively tested with 138 shovel tests. Flakes and fire-cracked rock were recovered from only three units within the area of site 41DT227 (see Figure 8-135). The deepest artifact was recovered at a depth of 21 cm below ground surface, indicating that the site deposits are shallow. Total site area is 3,200 m² (34,445 ft²), but it should be noted that cultural materials were distributed sporadically throughout this area.

Recommendations

No temporally diagnostic artifacts were recovered from the site, and the age of the prehistoric occupation is unknown. Due to the low-density artifacts and absence of intact cultural materials, the site is of low potential to address the Research Design. It is deemed as clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

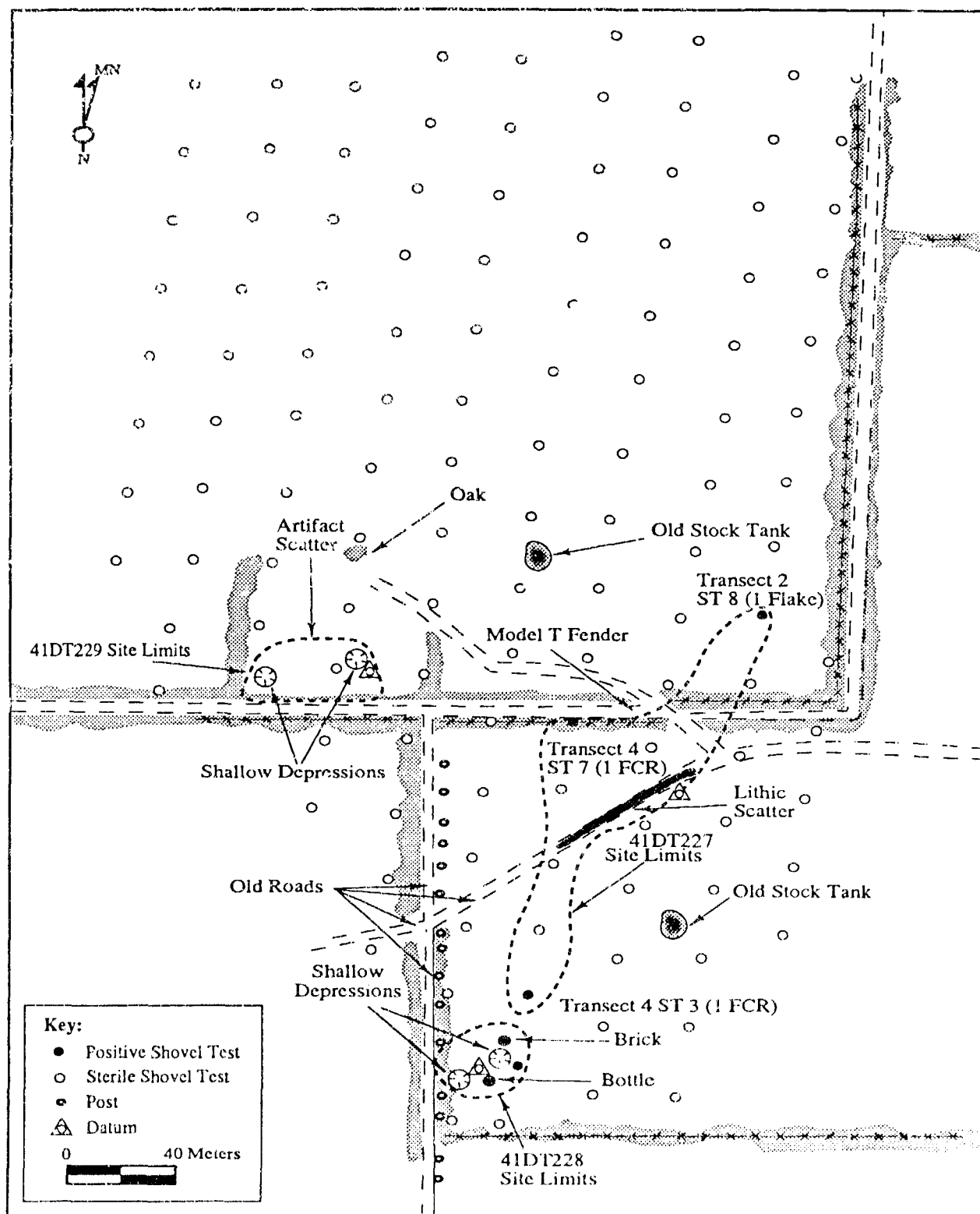


Figure 8-135. Plan of sites 41DT227, 41DT228, and 41DT229, showing locations of shovel tests, surface artifacts, site limits (as defined by surface artifacts and positive shovel tests), and land disturbances.

Site 41DT228

This newly recorded historic site (see Figure 8-135) is located 950 m (3,116 ft) south of Johns Creek and 3.3 km (2.05 mi) southeast of Klondike. Elevation at the site is 137 m (450 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area consisted of a slope forest with an upland prairie to the northwest and a floodplain forest to the southeast.

Stratigraphy

Two natural soil strata were identified at site 41DT228. These are described in order from older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt wavy boundary at 20 cm below ground surface. It extends to an average depth of 43 cm below ground surface. Stratum I is culturally sterile.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. All cultural materials are derived from this stratum.

Archival Information

Site 41DT228 (as with sites 41DT227, 41DT229, 41DT230, 41DT231, 41DT242, 41DT243, and 41DT244) is located on the B. N. Ball (A-254) Survey. This 331.9 ha (820 acre) grant was patented to Ball in 1860 (Delta County Deed Book 33: 345).

In 1936, site 41DT228 (along with site 41DT227) was located on a 37.6 ha (93 acre) tract owned by Mrs. T. J. Irwin of Klondike. At that time, 0.4 ha (1 acre) was reserved for a home. 18.2 ha (45 acres) were in cultivation (4 ha [10 acres] in corn and 14.2 ha [35 acres] in cotton). 15 ha (37 acres) were in woodland, and 4 ha (10 acres) were wasteland. No additional information was provided on the house.

An informant interview with "Hack" Henderson indicated that Charles Love lived at the site in 1926-27. There was a three-room cabin, a large barn, and a well at the site. The cabin and barn have been dismantled. A house is shown at the site on the 1924 map of the area.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey, shovel testing, and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. An extensive shovel testing program was conducted across the landform containing this site, since there was good potential for the presence of buried prehistoric and historic sites.

The site area is 900 m² (9,688 ft²). Two shallow depressions were noted at the site and may be the remains of collapsed cisterns or wells (see Figure 8-135). They are located on the east and west sides of a low-density scatter of brick and glass. A bottle base (marked "Figaro Chemical Co., Dallas, Texas"), one milk glass table ware, one manganese solarized glass fragment, and one machine-made brick fragment were collected from the site. The marked bottle was made by an automated bottling machine and dates from 1930 to the present. The manganese solarized bottle glass dates ca. 1880-1920.

Recommendations

Occupation of the site dates from the turn of the century to the 1970s. The site is considered to be clearly not eligible (Category III) for nomination to the National Register. This property type is one of the most common in Cooper Lake, and additional investigation would in all likelihood yield redundant information. If future information is found that warrants additional consideration, this site will be reevaluated for NRHP eligibility. No further work is recommended at this time.

Site 41DT229

This newly recorded historic site (see Figure 8-135) is located on an isolated knoll 800 m (2,624 ft) south of Johns Creek and 3.15 km (1.96 mi) southeast of Klondike. Elevation at the site is 134 m (440 ft) above msl. In its native state, this area consisted of a slope forest with an upland prairie to the northwest and a floodplain forest to the southeast.

Stratigraphy

Two natural soil strata were identified at site 41DT229. These are described in order from older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt wavy boundary at 20 cm below ground surface. It extends to an average depth of 43 cm below ground surface. Stratum I is culturally sterile.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. All cultural materials are derived from this stratum.

Archival Information

Site 41DT229 (as with sites 41DT227, 41DT228, 41DT230, 41DT231, 41DT242, 41DT243, and 41DT244) is located on the B. N. Ball (A-254) Survey. This 331.9 ha (820 acre) grant was patented to Ball in 1860 (Delta County Deed Book 33: 345).

In 1936, site 41DT229 was located on a 4 ha (10 acre) tract belonging to S. D. English. The entire tract was in cultivation, and no house was present.

An informant interview with Mr. Henderson indicated that an African American woman named Kennedy lived at the site. A house is shown in the vicinity of the site on the 1914 Levee Improvement District Map and the 1941 highway map of the area.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 20 m interval pedestrian survey, shovel testing, and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. An extensive shovel testing program was conducted across the landform containing this site since there was good potential for the presence of buried sites.

The total site area is 2,000 m² (0.5 acre). A low-density artifact scatter was observed along a 20 m stretch of pasture road. Machine-made brick, Mason canning jars, recent glass bottles, and a stove were recorded but not collected from the

site. Two subsurface circular depressions, each ca. 4 m in diameter, were noted at the site (see Figure 8-135), and may be the remains of cisterns. The material culture and archival information both indicate post-1936 occupation of the site.

Recommendations

Occupation of the site dates from the early to mid-twentieth century. Although the ethnicity of one of the previous occupants has been identified, several residents have lived at this site. Recent occupations and removal of the structure also have altered the site's integrity. The site is considered to be clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT230

This newly recorded historic site (Figure 8-136) is located in a floodplain/slope setting at the base of a south-facing terrace that is 550 m (1,804 ft) north of the South Sulphur River. The site is 3.23 km (2 mi) southeast of Klondike. Elevation at the site is 131 m (430 ft) above msl, and the mapped soil type is Benclin silt loam. In its native state, this area was a floodplain forest.

Stratigraphy

The single natural soil stratum identified at site 41DT230 is a very dark grayish brown (10YR3/2) silt loam. It has a maximum depth of 15 cm. All historical materials are assumed to be derived from this stratum.

Archival Information

Site 41DT230 (as with sites 41DT227, 41DT228, 41DT229, 41DT231, 41DT242, 41DT243, and 41DT244) is located on the B. N. Ball (A-254) Survey. This 331.9 ha (820 acre) grant was patented to Ball in 1860 (Delta County Deed Book 33: 345).

In 1936, site 41DT230 (along with site 41DT231) was located on a 4 ha (10 acre) tract

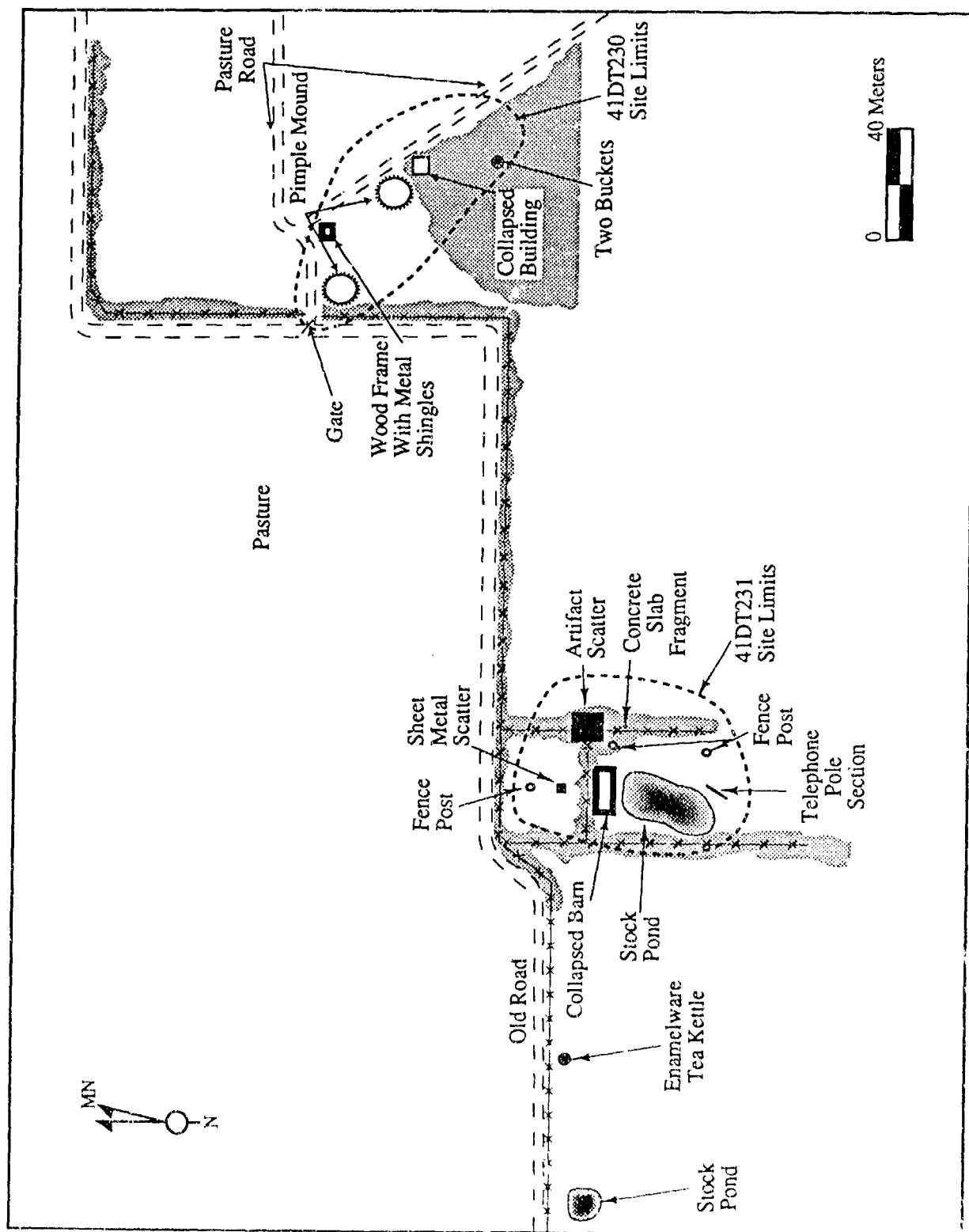


Figure 8-136. Plan of sites 41DT220 and 41DT231, showing locations of site limits, surface artifacts and features, and land disturbances.

belonging to the estate of J. B. Blandon. Blandon obtained the property in 1906 for \$150 (Delta County Deed Book 14: 180). By 1936 the property had depreciated to \$100. The entire tract was cultivated in cotton. No house was present.

The 1914 Levee Improvement District Map shows a house in the vicinity of 41DT230. An informant interview with Mr. Henderson indicated that the Irwin family lived in this area.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 15 cm) was excavated for the permanent datum, but no artifacts were recovered.

The low-density sheet refuse deposits cover less than 2,000 m² at site 41DT230. Two collapsed structures are present at the site (see Figure 8-136). In the southeast portion of the site, a collapsed outbuilding, composed of wooden planks and corrugated sheet metal, was found. Two rusted metal buckets were identified 30 m south of this structure. The collapsed remains of another outbuilding were found 35 m north of this structure. A wooden plank frame with sheet metal was found at this location, and may be the remains of a barn.

Recommendations

This site was initially occupied after 1936. Due to the long, possibly serial occupation and use, particularly in the 1960s and 1970s, this site has low potential to address the ethnic, material culture, and settlement questions outlined in the Research Design. The site is considered to be clearly not eligible (Category II) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT231

This newly recorded historic site (see Figure 8-136) is located in a floodplain/slope setting 450 m (1,476 ft) north of the South Sulphur River and 3.1 km (2.5 mi) southeast of Klondike. Elevation at the site is 131 m (430 ft) above msl, and the mapped soil type is of the Freestone-Hicota complex. In its native state, this area was a floodplain forest.

Stratigraphy

The single natural soil stratum identified at site 41DT231 is a brown (10YR5/3) fine sandy loam. It was excavated to a maximum depth of 35 cm below ground surface. All cultural materials are derived from this soil stratum.

Archival Information

Site 41DT231 (as with sites 41DT227, 41DT228, 41DT229, 41DT230, 41DT242, 41DT243, and 41DT244) is located on the B. N. Ball (A-254) Survey. This 331.9 ha (820 acre) grant was patented to Ball in 1860 (Delta County Deed Book 33: 345).

In 1936, site 41DT231 (along with site 41DT230) was located on a 4 ha (10 acre) tract belonging to the estate of J. B. Blandon. Blandon obtained the property in 1906 for \$150 (Delta County Deed Book 14: 180). By 1936 the property had depreciated to \$100. All 4 ha (10 acres) were cultivated in cotton. No house was present.

Based on all archival and informant data, site 41DT231 (along with site 41DT230) was initially occupied by the Irwin Family after 1936. A house is shown at this location on the 1914, 1936, and 1941 maps. Mr. Henderson stated that Calvin Carter once lived at the site. He was apparently a tenant farmer.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since

the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 35 cm) was excavated in the center of the site. No artifacts were recovered.

The site area is estimated to be 2,500 m² (0.6 acre). A collapsed barn is present near the center of the site (see Figure 8-136). It is constructed with wooden planks and corrugated sheet metal. A stock pond is located just south of this structure. A large scatter of recent trash that is located on the eastern edge of the site contains enamelware, sheet metal, buckets, and washtubs. No collections were made from this refuse pile.

Recommendations

This site was initially occupied after 1936. The major use of this site has been for ranching activities, although residents are reported. The informant reports confirm the transient occupations of this site. The post-1970 use of this site for ranching has also altered its integrity, and it has low potential to address the research questions outlined in the Research Design. The site is considered to be clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT232

This newly recorded historic site (see Figure 8-103) is located in an upland setting 1.9 km (1.2 mi) north of the South Sulphur River and 2.15 km (1.3 mi) southeast of Klondike. Elevation at the site is 133 m (435 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this was an upland prairie.

Stratigraphy

Two natural soil strata were identified at site 41DT232. These are discussed in order from the older (lower) to younger (upper). Stratum I is a brown (10YR4/3) clay. This is the upper B soil horizon and has a clear wavy upper boundary at 18 cm below surface. It was excavated to a depth

of 35 cm below ground surface, and is culturally sterile.

Stratum II, the surface horizon, is the modern plow zone. It is a dark brown (10YR3/3) clay loam. All cultural materials from site 41DT232 are derived from this stratum.

Archival Information

A house is shown in the vicinity of site 41DT232 on the 1914 Levee Improvement District Map. However, the 1941 and 1951 highway maps do not indicate a structure. The USGS map clearly indicates a barn in this location.

Site 41DT232 is located (along with sites 41DT181, 41DT188, and 41DT259) on the Loftis Vess (A-445) Survey. This 129.5 ha (320 acre) tract was patented in 1861 (Delta County Deed Book 33: 97). In 1936, site 41DT232 (along with site 41DT188) was located on a 70.8 ha (174.9 acre) tract owned by Dr. O.Y. James of Cooper. Dr. James obtained this property in 1913 for \$1 (Delta County Deed Book 22: 156, Delta County Deed Book 23: 74). In 1936, 0.8 ha (2 acres) was reserved for homes, 0.4 ha (1 acre) for a garden, 35.2 ha (87 acres) were in cultivation (10 ha [25 acres] in corn and oats, and 25.1 ha [62 acres] in cotton), 16.2 ha (40 acres) in pasture, 6.1 ha (15 acres) in woodland, 4 ha (10 acres) were meadows, and 7.7 ha (19 acres) were wasteland. The farm was leased to tenants and valued at \$2,000.

Two dwellings were listed on the James tract in 1936. One was a 28 ft x 22 ft, four-room shack; the other was a 28 ft x 28 ft three-room shack. A shed and a barn were also present. These were gable-roofed, box and strip houses.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 35 cm) was excavated for the permanent datum. No artifacts were recovered.

The total site area is 640 m² (6,889 ft²). Two features are present at the site. A rectangular,

raised earth mound (3 m x 9 m) containing vertical wooden posts is located in the western portion of the site (see Figure 8-103). This feature may be associated with the house. A brick-lined (machine-made) cistern is located 30 m northeast of this feature. A surface scatter of whiteware, clear and aqua vessel glass, window glass, and sheet metal was noted in a 200 m² area around the feature.

Recommendations

Although a site was shown in the vicinity of site 41DT232 in 1914, the material remains noted relate to the ca. 1936 occupation of the site by tenants. Dr. O.Y. James probably started the farm after 1913, when he apparently obtained it as an inheritance. The site has been serially occupied by tenants since at least 1936, and was abandoned as a domicile by 1940. Ranching activities

continued at this locality until the 1970s. Further investigations at site 41DT232 would in all likelihood yield redundant information on twentieth century farming, material culture, and lifeways. The site is deemed clearly not eligible (Category III) for nomination to the National Register, and no further work is recommended at this time.

Site 41DT233

This newly recorded historic site (Figure 8-137) is located in upland pasture at 133 m (435 ft) above msl elevation. The South Sulphur River flows 950 m (3,116 ft) to the south. Jernigan Creek runs 1.8 km (1.1 mi) west of the site. The site is 2.8 km (1.7 mi) south of Klondike. The mapped soil type is Wilson silt loam. In its native state, this was an upland prairie.

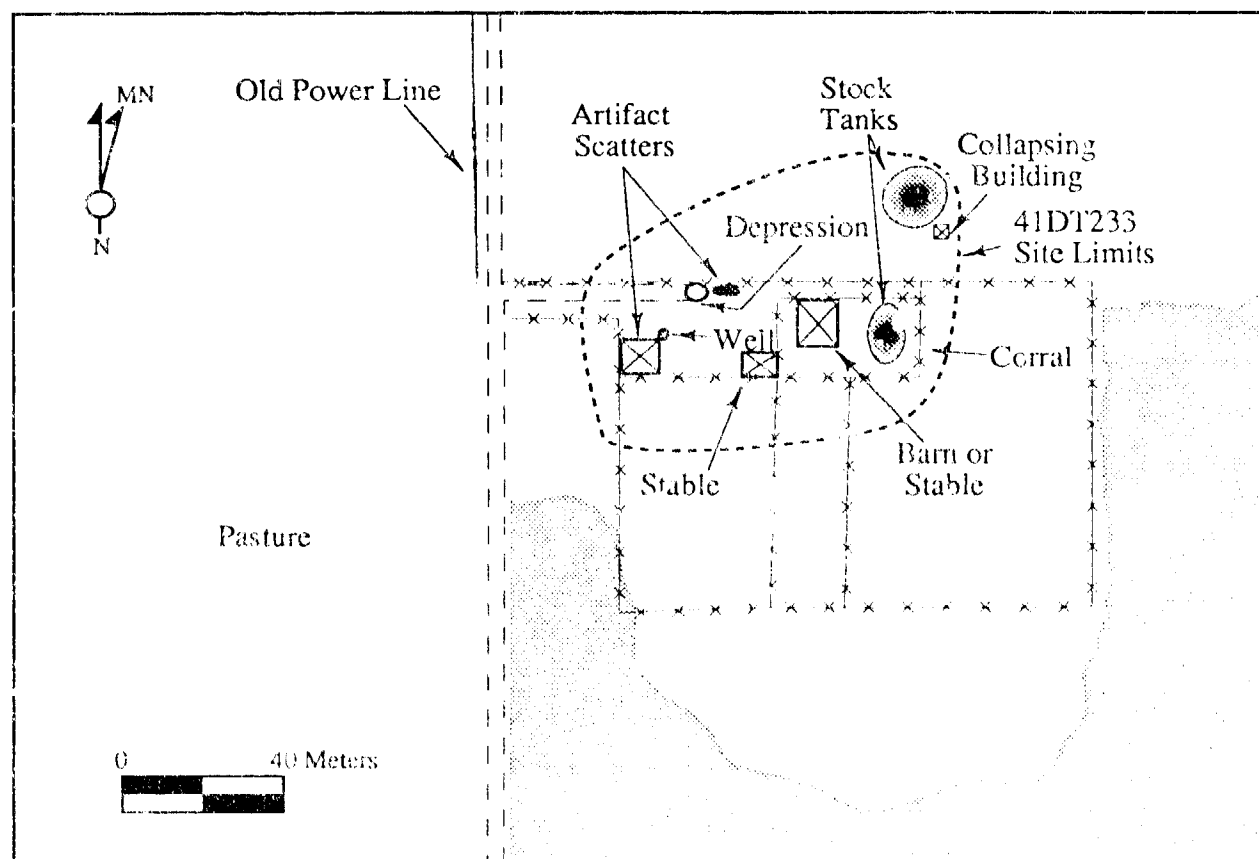


Figure 8-137. Plan of site 41DT233, showing location of site limits (as defined by surface artifacts and features) and land disturbances.

Stratigraphy

The single natural soil stratum identified at site 41DT233 is a very dark gray (10YR3/1) clay loam which is the modern plow zone. It was excavated to a maximum depth of 35 cm below ground surface. All cultural materials at the site were derived from this stratum.

Archival Information

Site 41DT233 is located on the James P. David (A-100) Survey. A house is shown at this general location on the 1914 Levee Improvement District Map. No house is indicated on the 1941 highway map. The WPA files for this tract were not available. A house and two outbuildings are shown on the U.S.G.S. Klondike 7.5' Quadrangle map (1964). Mr. Henderson and Jeff Blandon indicated that David Dean lived at the site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. The site and its boundaries were evident from surface remains. A single shovel test (35 cm x 35 cm x 35 cm) was excavated for the permanent datum. No artifacts were recovered.

The site consists of structural remains and a sparse artifact scatter. The features and artifacts noted during pedestrian survey extend over an area of 9,600 m² (2.4 acres). Features present include a 100 m² scatter of sheet metal, brick and wooden planks; a commercial brick-lined well/cistern at the northeast corner of the scatter; an oval depression that is possibly a collapsed storm cellar; a corral/barn complex; a collapsing small rectangular wooden plank structure, probably a hen house or livestock feeder; and a collapsing small stable or storage shed (see Figure 8-137). A stock pond is 20 m north of the corral/barn.

The artifact scatter consisted of sheet metal, wooden planks, FERRIS brick (dating ca. 1895-1970), one stoneware pot fragment, one enamelware pot, one brown glass Clorox bottle, Ford Model T automobile parts, and one children's steel toy wagon. One manganese bottle glass (1880-1920) fragment was collected in the

non-controlled surface collection. This fragment still retained the letters "WAN...."

Recommendations

The site represents an abandoned farmstead that was part of the Friendship Community. Based on informant and archival researches and the observed material culture, the site was occupied from ca. 1914-1930s and was reused for ranching until the 1970s. The evaluation of this information does not indicate any historical significance for this property. Further investigations would in all likelihood provide redundant information. The site is considered to be clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT234

This newly recorded historic site is located in upland pasture at 134 m (440 ft) above msl elevation. Honey Creek is 850 m (2,788 ft) to the north and Jernigan Creek is 2.2 km (1.4 mi) to the west. The South Sulphur River runs 1.45 km (0.9 mi) south of the site. The site is 2.34 km (1.45 mi) south-southeast of Klondike. The mapped soil type is Crockett loam. In its native state, this area was a post oak savannah with a floodplain forest to the south.

Stratigraphy

The single natural soil stratum identified at site 41DT234 is a very dark grayish brown (10YR4/3) clay which is the modern plow zone. The stratum extends to an average depth of 20 cm below ground surface.

Archival Information

Site 41DT234 is located on the James P. Daniel (A-100) Survey. No structures are shown at this location on the 1914 Levee Improvement District Map. A house is shown, however, at this location on the 1941 highway maps. The U.S.G.S. Klondike 7.5' Quadrangle map (1964) shows two

outbuildings at the site. Jeff Blandon stated that Mr. Self lived at the site. Other informant's report that Jesse and Sam English also lived here.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey. Since the site and its boundaries were evident from surface remains, these were assessed as to age.

The site consists of nine wooden piers, two wells or cisterns lined with machine-made brick (i.e., Ferris and Atlas brick), and a scatter of artifacts around the wooden piers. The wooden piers likely supported a building. Total site area is 1,500 m² (16,146 ft²). The artifact scatter includes machine-made brick, sheet metal, and thick aqua glass distributed around the wooden piers. No collections were made at the site since all items noted were less than 50 years old. A corral and small plank structure are located near the site features noted above, but appear to be more recent and were probably installed after the site occupation.

Recommendations

Occupation of the site is dated to the mid-twentieth century. The site may have been bulldozed. Based on the age and disturbance of the site, it has low potential to address the questions outlined in the Research Design, and is deemed clearly not eligible (Category III) for nomination to the National Register. Further investigations would in all likelihood yield redundant information relating to mid-twentieth century farmsteads. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT235

This newly recorded historic site is located 1.42 km (0.88 mi) north of the South Sulphur River and is 2.26 km (1.4 mi) southeast of Klondike. Elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Wilson silt loam. In its native state, this area was an upland prairie.

Stratigraphy

The single soil stratum identified at site 41DT235 is a very dark gray (10YR3/1) clay loam which is the modern plow zone. All cultural materials at this site are derived from this stratum.

Archival Information

Site 41DT235 is located on the James F. Daniel (A-100) Survey. A house is shown in the vicinity of this site on the 1914 Levee Improvement District Map. The WPA files for this survey were not available. A house is shown in the vicinity of site 41DT235 on the 1941 highway map. Jeff Blandon recalled that Jesse Jones once lived at the site. He was apparently a tenant and is not listed among the known individuals in Friendship Cemetery.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey. Since the site and its boundaries were evident from surface remains, these were assessed as to age. A single shovel test (35 x 35 x 35 cm) was excavated for the permanent datum. No artifacts were recovered.

The total site area is 2,000 m² (0.5 acre). The only subsurface features at the site are two depressions, which may be the remains of storm shelters or cisterns. These features are located in the northern portion of the site. Machine-made brick, concrete, mason jar fragments, and whiteware sherds are scattered in and around the oval depression in the northeast corner of the site. A 40 m² scatter of brick was recorded southeast of these features. One quartzite flake was collected from the site, but is an isolated find.

Recommendations

Site occupancy dates from the early to mid-twentieth century. Archival and informant researches do not indicate any historical significance for this property. The site's intense use since 1950 detracts from its potential to address the questions outlined in the Research Design. The site is considered to be clearly not

eligible (Category III) for the National Register. Further investigations would in all likelihood yield redundant information relating to twentieth century farmsteads. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT236

This newly recorded historic site (Figure 8-138) is located on the west side of FM 1880, 1.7 km (1.1 mi) south of the Old Liberty Grove

Cemetery. The site is 1.42 km (0.8 mi) north-northwest of the Deep Well crossing over the South Sulphur River. Elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was an upland prairie with a floodplain forest to the south.

Stratigraphy

Two natural soil strata were identified at site 41DT236. These strata are discussed in order from older (lower) to younger (upper). Stratum I is

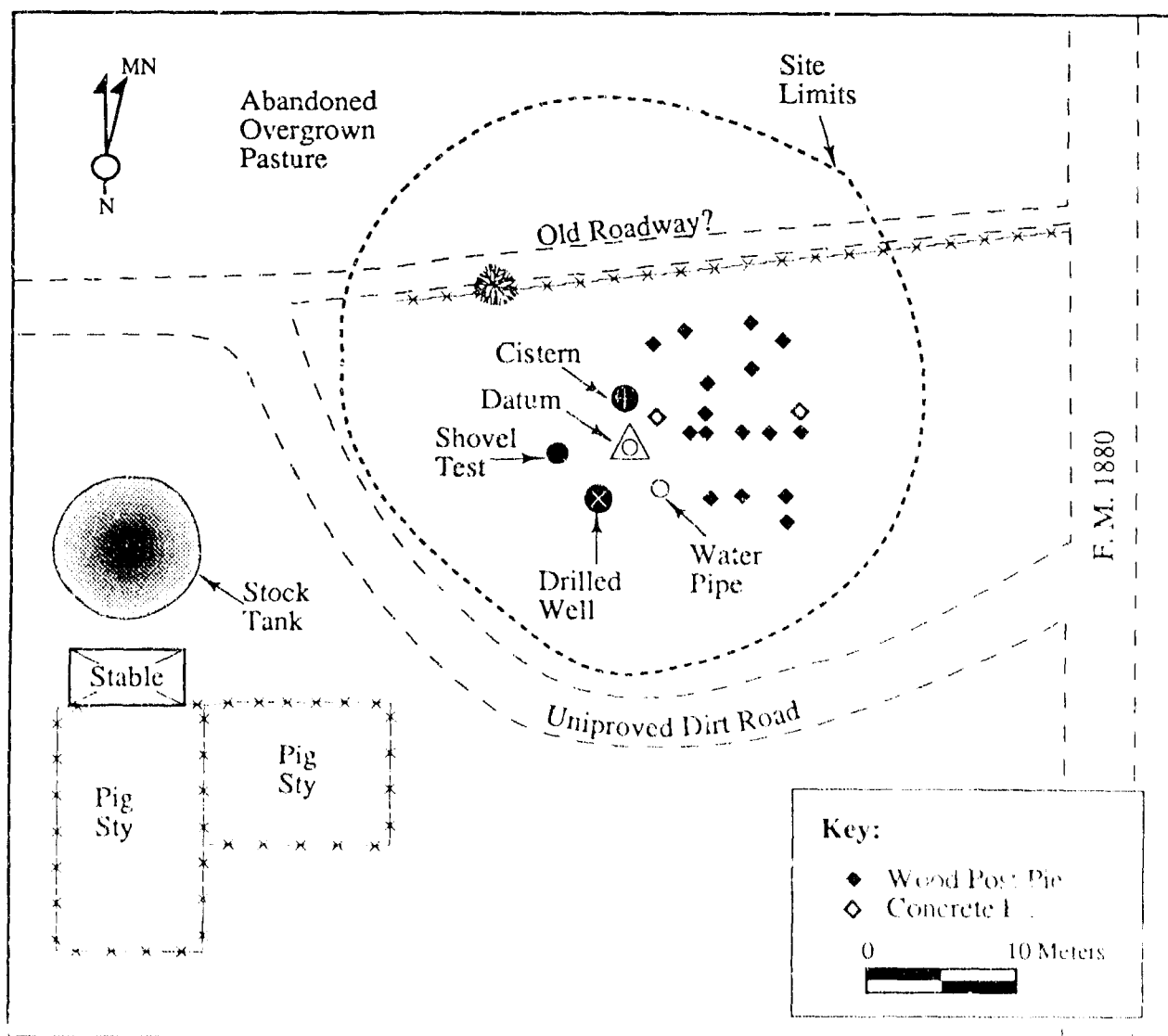


Figure 8-138. Plan of site 41DT236, showing locations of shovel tests, site limits (as defined by surface artifacts and features), and land disturbances.

the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt upper boundary at 25 cm below ground surface. It was excavated to a maximum depth of 35 cm below ground surface. Stratum I is culturally sterile.

Stratum II is the surface soil horizon. It is a very dark grayish brown (10YR3/2) loam, which is the modern plow zone. All historic artifacts observed at the site are derived from this stratum.

Archival Information

Site 41DT236 is located within the J. Zunega Survey (A-411), which was a 741.1 ha (1,832 acre) grant patented to John Gregg on 11 May 1857 (Delta County Deed Book 2H:191). In 1936, this site was situated at the junction of three tracts belonging to H. H. Hagood, J. W. Maynard, and Mrs. A. P. Miller, respectively. Mr. H. H. Hagood lived in Cooper and his 17 ha (42 acre) tract was farmed by tenants, with 11.3 ha (28 acres) cultivated in cotton and 3.2 ha (8 acres) in grain.

Hagood had obtained the property in 1929 for \$5 (Delta County Deed Book 74: 172). In 1936, the property was worth \$420, depreciating from an earlier value of \$525. No house was present. J. W. Maynard lived on a 36.8 ha (91 acre) tract to the south of site 41DT236, and his tenant worked the 29.5 ha (73 acre) tract adjacent to the site. Maynard had obtained the property in 1913 for \$1 (Delta County Deed Book 31: 181). In 1936, the property was worth \$700, depreciating from an earlier value of \$730. Twenty ha (50 acres) were devoted to cotton and 4.8 ha (12 acres) to grain. A 24 ft x 32 ft residence was present on Maynard's tract at that time.

Mrs. A. P. Miller lived in Cooper and her tenants worked this 263 ha (650 acre) farm, where six dwellings are indicated in 1936. Miller had obtained the property in 1905 for \$650 (Delta County Deed Book 13: 388). By 1936, the value of her property had increased and was worth \$9,100. In all, 140.8 ha (348 acres) were in cotton and 60.7 ha (150 acres) were in grain on her farm.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m

interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (25 x 25 x 35 cm) was excavated. This unit was sterile and indicated that the topsoil was 25 cm deep.

The total area of site 41DT236 is 3,600 m² (0.9 acre). There were no domestic artifacts associated with the architectural remains present at this site (see Figure 8-138). These remains consisted of wooden piers for a 14 m x 10 m barn, a commercial brick cistern, and a modern stable and corral complex. Bottles, sheet metal, buckets, and tubs have been dumped as refuse on the site. Although a house is shown in this area on the 1964 map, the cartographer may have erred, mistaking a barn or corral for a dwelling.

Recommendations

No structure is shown in this location of the 1941 highway map, but one is shown in this general area on the 1951 map. This structure appears to date ca. 1950. Archival research indicates that tenants operated this farm throughout the twentieth century, but there was no firm indication of a residence or home in 1936. Informants have not shed any light on the ethnicity of the previous occupants. Based on the recent age of this site and its non-domestic reuse for ranching, data from the site cannot be used to address the material culture or settlement research questions presented in the Research Design. Also, the individuals who resided here were not important to local history, and this confirms the lack of significance for this property. The site is classified as Category III and no further work is recommended.

Site 41DT237

This newly recorded historic site (Figure 8-139) is located in a slope/upland setting 880 m (2,886.4 ft) west of FM 1880 on the south side of an unnamed dirt road. The site is 1.95 km (1.2 mi) southwest of the Old Liberty Grove Cemetery. Elevation at the site is 135 m (444 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this was a post oak savannah with an adjacent floodplain forest to the south.

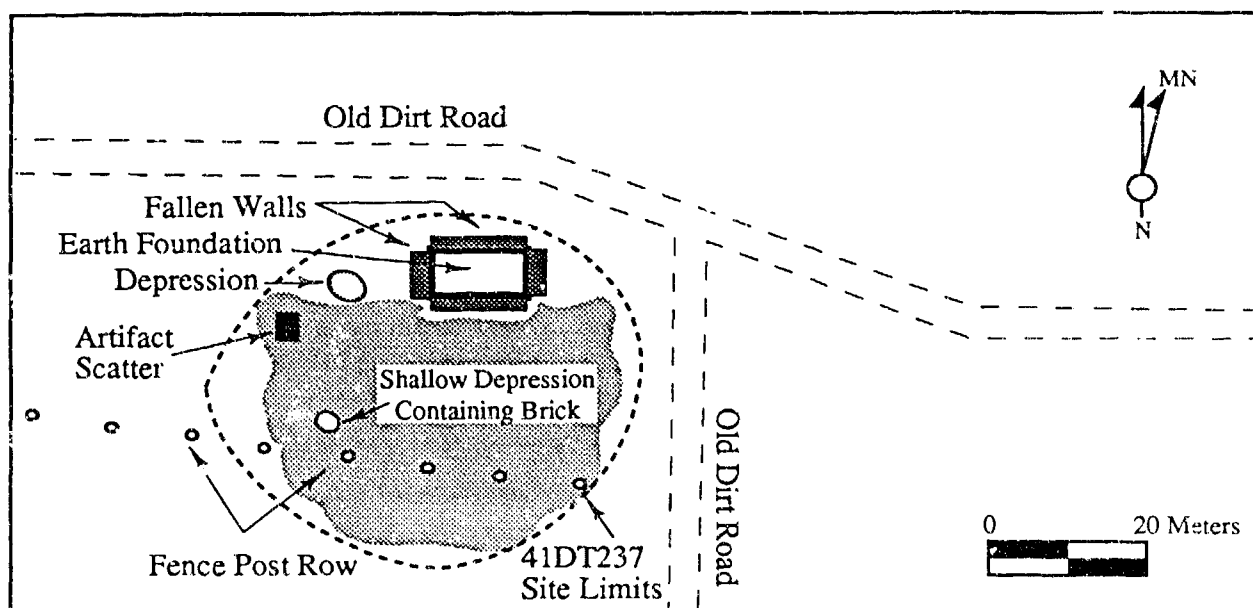


Figure 8-139. Plan of site 41DT237, showing locations of site limits (as defined by surface artifacts and features) and land disturbances.

Stratigraphy

Two natural soil strata were identified at site 41DT237. These are discussed in order from older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is brown (10YR4/3) clay with an abrupt wavy, upper boundary at 20 cm below ground surface. Stratum I is culturally sterile.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. All historic cultural materials at site 41DT237 were derived from this stratum.

Archival Information

Site 41DT237 is located on the J. Zunega (A-100) Survey. This 741.4 ha (1,832 acre) grant was patented to John Gregg in 1857 (Delta County Deed Book 2-H: 191). In 1936, site 41DT237 was located on an 32.4 ha (80 acre) tract owned by the John Hancock Mutual Life Insurance Company, which obtained the property in 1932 for \$1,000 (Delta County Deed Book 68: 579). In 1936, the property was worth \$1,200. At that time 0.8 ha (2 acres) were reserved for the house, 23.5 ha (58 acres) were in cultivation (6 ha [15 acres] in corn and 23.5 ha [43 acres] in cotton), 6 ha (15 acres) were in pasture, and 2 ha (5 acres) were in

wasteland. The farm was operated by tenants. A single box and strip dwelling, measuring 32 ft x 36 ft, and a 16 ft x 20 ft barn were present on the site at the time.

A house is shown at this site on the 1914 Levee Improvement District Map. A house was shown in this vicinity in 1941, but had been removed by 1964.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. A single shovel test (35 cm x 35 cm x 20 cm) was excavated for the permanent datum. No artifacts were recovered.

The total site area is 3,600 m² (0.9 acre). The remains of a collapsed structure are present in the northern part of the site and may be the remains of a barn or stable (see Figure 8-139). Dimensions of this structure are 8 m x 13 m (26.2 ft x 46.2 ft). A cistern lined with machine-made brick is located at the southwest corner of this structure. A rectangular depression located 10 m west of the structure may have been a storm shelter. A small

circular depression containing machine-made brick is present 15 m southwest of the structure. Its function is unknown. There is a scatter of recent refuse 35 m west of the structure that is derived from recent dumping.

The artifact assemblage recovered from the ground surface at 41DT237 consists of 13 items, including four refined earthenwares and nine bottle glass fragments. The whitewares and porcelains date from 1890 to the present. One manganese solarized bottle glass dates between 1880 and 1920. One Coca-Cola bottle in the assemblage was made in Galveston, Texas.

Recommendations

Site occupation dates from the early to mid-twentieth century. Archival and informant researches indicate that the site was occupied by tenants. This site is considered to be clearly not eligible (Category III) for the National Register. Further investigations would in all likelihood provide redundant information relating to twentieth century farmsteads and material culture. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT238

This newly recorded historic site (Figure 8-140) is located in a slope/upland setting 490 m (1,607.2 ft) east of FM 1880 on the north side of a bend in an unnamed dirt road. The site is 1.56 km (0.97 mi) south-southeast of the Old Liberty Grove Cemetery. Elevation is 133 m (436 ft) above msl, and the mapped soil is Crockett loam. In its native state, this was a post oak savannah with an adjacent floodplain forest to the south.

Stratigraphy

Two natural soil strata were identified at site 41DT237. These strata are discussed in order from older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with an abrupt, wavy upper boundary at 20 cm below ground surface.

Stratum II, the surface soil horizon, is the modern plow zone. It is a very dark grayish brown (10YR3/2) loam. All historic cultural materials from the present investigations at site 41DT237 derive from this stratum.

Archival Information

Site 41DT238 is located on the J. Zunega Survey (A-411), which has been discussed for site 41DT236, above. Based on an examination of the 1936 WPA surveys, this site is located on a 263 ha (650 acre) farm belonging to a nonresident landlord, Mrs. A. P. Miller of Cooper. Mrs. Miller purchased this tract on 16 October 1905 (Delta County Deed Book 13:388). Unfortunately, none of the plat maps indicate where Mrs. Miller's tenants lived, but the WPA files do indicate three 28 ft x 32 ft bungalows and three dwellings (one 36 ft x 28 ft, one 32 ft x 32 ft, and one 32 ft x 30 ft). Two barns were also indicated, one 28 ft x 40 ft and the other 30 ft x 20 ft. The WPA surveyor indicated that the farm suffered from severe erosion and badly needed terracing. Neither the 1941 nor the 1951 highway map for Delta County indicate structures in the vicinity of site 41DT238. Two barns are shown at this location on the 1964 map.

Archaeological Investigations

Fieldwork at site 41DT238 consisted of mapping of surface features and collection of artifacts representative of original domestic occupation. Surface features included a standing barn, a scatter of bricks and planks, an earthen mound with commercial brick, and fences (see Figure 8-140). A single shovel test (25 cm x 25 cm x 35 cm) was excavated in the earth and brick mound. Only bricks were noted in this feature, and the entire mound appears to be the bulldozed remains of a dwelling. The total site area is 6,300 m² (1.5 acres).

Only two domestic artifacts (a stoneware fragment and a sherd of ironstone/whiteware) were collected from the ground surface at this site. These artifacts date to the early twentieth century, but do not provide any higher resolution dating or functional interpretations.

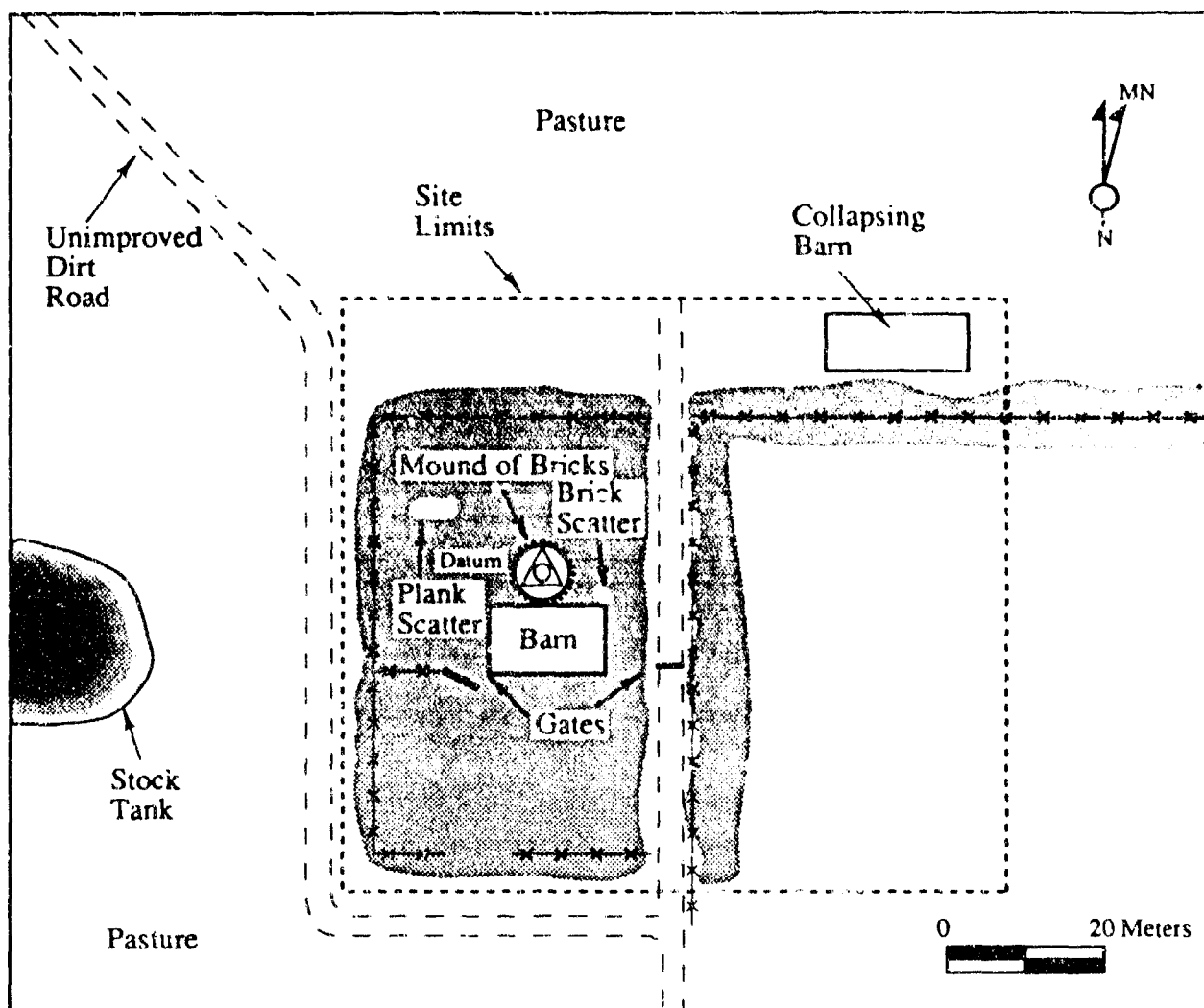


Figure 8-140. Plan of site 41DT238, showing locations of site limits (as defined by surface artifacts and features), site datum, and land disturbances.

Recommendations

The majority of the artifacts observed at site 41DT238 have been dumped on the site within the last decade. Artifacts relating to the original ca. 1905-1936 occupation were scarce and collected in their entirety. Since the original dwelling has been bulldozed, there are no remaining features which can be correlated to the WPA notes. Also, due to the fact that there has been extensive alteration to the site, it is not expected to yield important information related to the questions outlined in the Research Design. Archival research indicates that this site was probably occupied by tenants in the 1930s, and that no one important to local history

resided here. Site 41DT238 is classified as Category III, and no further work is recommended.

Site 41DT239

This newly recorded historic site (Figure 8-141) is located in an upland setting 250 m (820 ft) west of FM 1880 and 1.46 km (0.91 mi) south-southeast of Liberty Grove. Elevation at the site is 132 m (432 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this area was an upland prairie with an adjacent slope forest to the south.

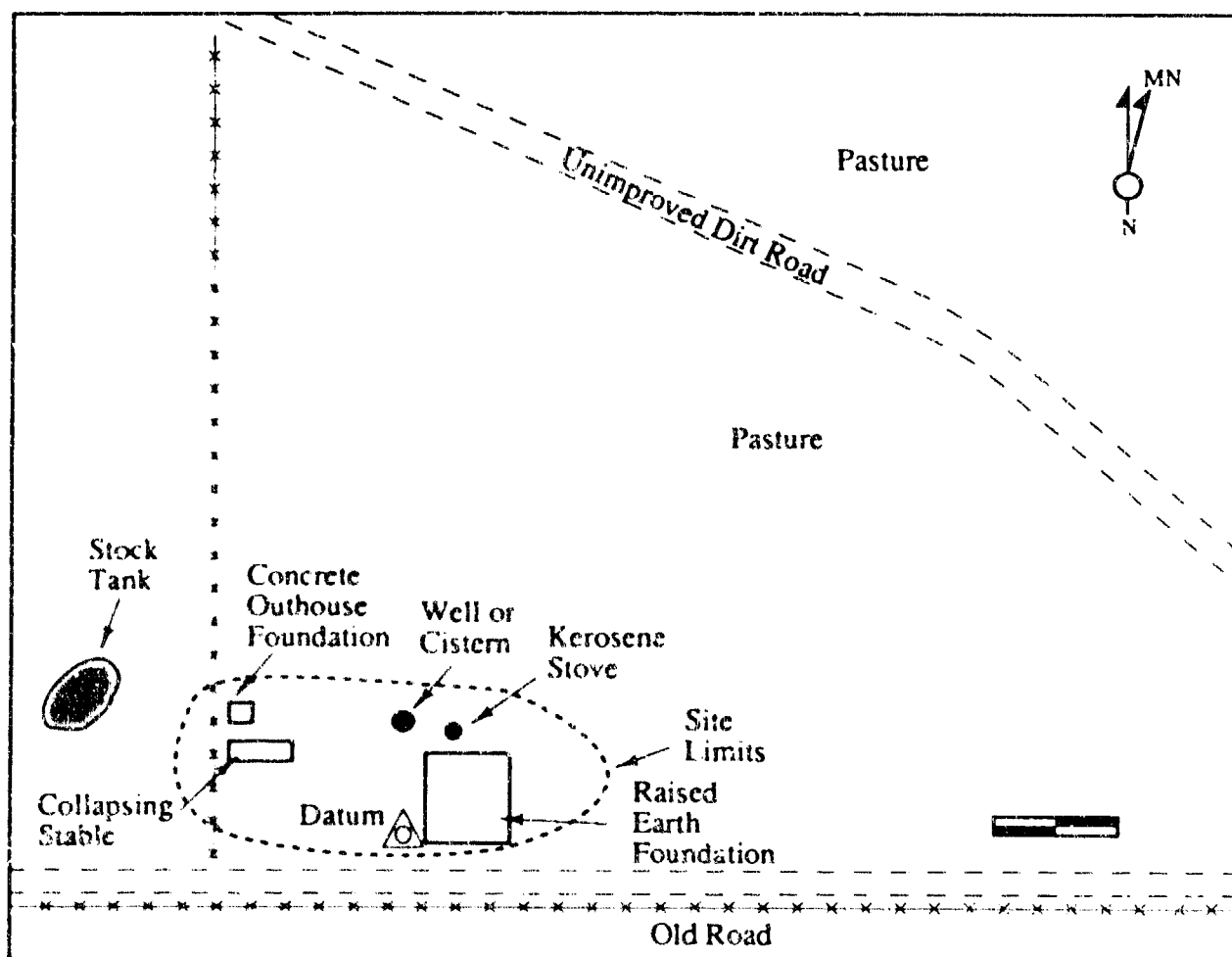


Figure 8-141. Plan of site 41DT239, showing locations of site limits, (as defined by surface artifacts and features), site datum, and land disturbances.

Stratigraphy

Two natural soil strata were identified at site 41DT239. These strata are described in order from older (lower) to younger (upper).

Stratum I is the upper B soil horizon. It is brown (10YR4/3) clay with a clear wavy upper boundary at 18 cm below ground surface. It was excavated to a maximum depth of 35 cm below ground surface. Stratum I is culturally sterile.

Stratum II, the surface soil horizon, is the modern plow zone. It is a dark brown (10YR3/3) clay loam. All historic materials recovered during the present investigations derive from this stratum.

Archival Information

Site 41DT239 is also located on the J. Zunega Survey (for discussions of the early land history of this tract, the reader is referred to the discussions of sites 41DT236 and 41DT238). Site 41DT239 may have been one of the tenant residences on the 263 ha (650 acre) farm belonging to Mrs. A.P. Miller in 1936. There is no house site shown in the 41DT239 location on the 1914-1915 map prepared for the Delta County Levee Improvement District Number 4. Although houses are shown in this general vicinity on the 1941 and 1951 highway maps, these maps are

not sufficiently accurate to correlate any of these dwellings with site 41DT239.

Archaeological Investigations

Fieldwork consisted of mapping the surface features and surface artifacts at the site (see Figure 8-141). None of the artifacts were associated with original occupation/use of the site, but were derived from modern dumping activities in the house and stable area. Surface features consisted of a raised earth area measuring 8 m x 10 m, a commercial brick cistern 4 m north of this area, support posts for a pole barn, and a concrete outhouse. A single 25 cm x 25 cm x 35 cm shovel test was excavated at the northeast corner of the 8 m x 10 m raised area, which is presumed to be a rectangular dwelling location. This sterile shovel test was used to seat the permanent datum.

None of the dwelling dimensions given in the 1936 WPA surveys match the dimensions of the presumed foundation at site 41DT239. All 1936 houses were nearly square, with less than a 2 ft difference in length/width measurements for rectangular structures of this general size.

In addition to the above features, recent refuse has been dumped at the site, including Diamond commercial brick, sheet metal, planks and posts, asphalt shingles, bottles, stove parts, and appliances.

Recommendations

None of the early maps clearly indicate that a structure may have been present at 41DT239, and no structure is shown on the 1964 map. The features at the site do suggest a dwelling, but the dumping of modern refuse across the site has hampered the identification of such a structure. Due to the lack of integrity, and lack of historical significance, this site is not deemed important for answering the material culture, chronological, and settlement questions outlined in the Research Design. The site is classified as Category III, and no further work is recommended.

Site 41DT240

This historic site (Figure 8-142) is located on the slope of a raised landform or knoll. The

vegetation consists of pasture with a grove of oak trees. Cannon Creek runs 500 m (1,640 ft) east of the site, and Doctors Creek runs 675-700 m (2,214-2,290 ft) to the south. A stock tank lies 200 m (656 ft) to the south and a modern corral is 80-90 m (262.4-295.2 ft) to the east. Elevation at the site is 134 m (440 ft) above msl, and the soil type is an Annona loam. In its native state, this area was an upland prairie. Today the site is in fallow pasture with secondary tree growth.

Stratigraphy

The single natural soil stratum identified at site 41DT240 is the surface soil horizon which is the modern plow zone. It is a dark grayish brown (10YR4/2) loam. All historic materials at the site are derived from this stratum.

Archival Information

Site 41DT240 is located on the boundary of the J. Turner (A-355) and E. R. Crowder (A-72) surveys. Based on the distribution of features and artifacts, most of the site is situated within the Crowder Survey, which was surveyed 22 October 1859 (Delta County Deed Book 33:160). In 1936, site 41DT240 was located within a 44.9 ha (111 acre) tract belonging to E. J. Jones which was later sold that year to Quentin Miller. Both men were living in Cooper, and the farm was operated by a tenant. In all, 30.4 ha (75 acres) were devoted to cotton, 10 ha (25 acres) to corn, and 13.8 ha (34 acres) were in pasture. The house rested on 0.4 ha (1 acre), and 0.4 ha (1 acre) of land was reserved for the garden. The house was described as being in fair condition and was listed as a three-room cottage measuring 32 ft x 36 ft. A barn was also present. Although there is no plotted location of the tenant dwelling, it could potentially be located within the boundaries of site 41DT240. There is no house site shown on the 1941 and 1951 highway maps or the 1964 map at this location.

Archaeological Investigations

Ground exposure at this site was excellent due to heavy livestock traffic. Fieldwork consisted of mapping surface features and artifacts (see

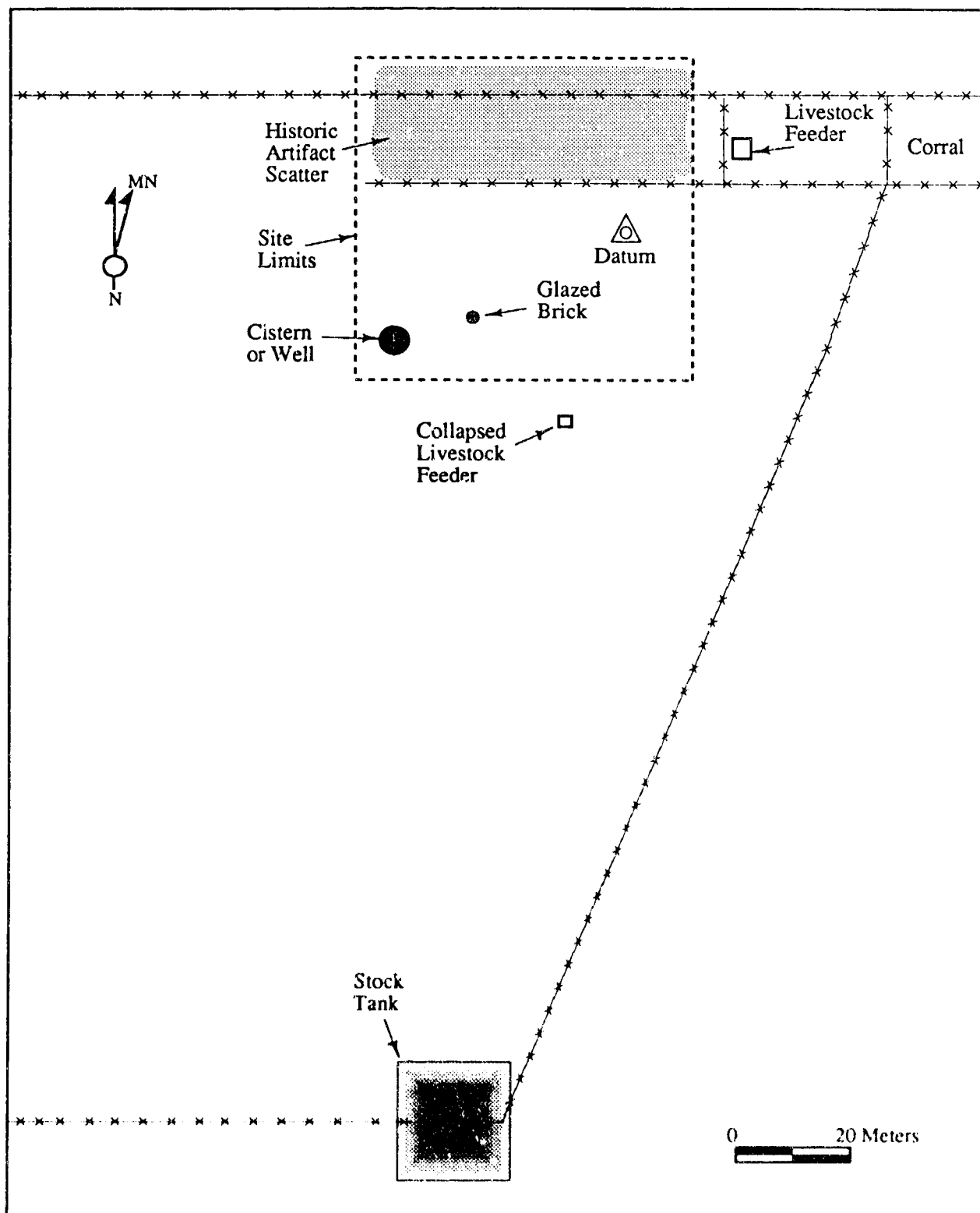


Figure 8-142. Plan of site 41DT240, showing locations of site limits (as defined by surface artifacts and features), site datum, and land disturbances.

Figure 8-142), and the collection of a representative sample of artifacts. Since shovel testing could not yield any further information of site size or integrity, the only subsurface excavation was for the permanent datum along the fence.

The site consists of a series of features and a scatter of historic artifacts measuring 3,600 m² (0.9 acre). The artifact scatter runs along both sides of a barbed wire fence. Features noted during pedestrian survey include a depression measuring 2 m in diameter, probably a cistern or well, and a 2 m long feature made of glazed handmade brick, probably a chimney fall or foundation.

The artifact assemblage consisted of an array of historic table glass and bottle glass, and ceramic artifacts. Bottle glass included one W. B. Caldwell Pepsin Syrup bottle fragment. An embossed Illinois clear bottle glass fragment, one milk glass Mason jar lid fragment, and one each of pale green, blue-green, manganese solarized, and cobalt blue bottle glass fragments were collected. One glass marble was recovered. Ceramics included two porcelain rim fragments, one with a red rose design, six white glazed fine earthenware fragments, one whiteware rim fragment with transfer print oriental willow design, and one annular ware fragment. One of the whitewares was stamped with "Fred Mono England."

Recommendations

The artifacts and features at site 41DT240 suggest late nineteenth century and early twentieth century occupations. The 1936 WPA surveys indicate that the 45 ha (111 acre) farm containing site 41DT240 was operated by a tenant. Due to the heavy traffic by livestock, plowing, and surface leveling, the archaeological integrity of the site is poor. Archival and informant researches indicate that there is little historical value attached to this property. The site will be located in a vegetation clearance zone, but the research potential is deemed to be low. Further investigations would, in all likelihood, provide redundant information on this historic property type. Based on this, the site is classified as Category III, and no further work is recommended.

Site 41DT241

This newly recorded prehistoric site with isolated historic artifacts (Figure 8-143) is located in the modern floodplain 440 m (1,443.2 ft) north of the South Sulphur River and 750 m (2,460 ft) north of S.H. 71. Elevation at the site is 135.6 m (445 ft) above msl, and the mapped soil type is Annona loam. In its native state, this area was an upland prairie. Today the site is in fallow pasture with secondary tree growth.

Stratigraphy

The single natural soil stratum identified at site 41DT240 is the surface soil horizon, which is the modern plow zone. It is a dark grayish brown (10YR4/2) loam. All historic materials at the site are derived from this stratum.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age. The site was revisited in the summer of 1990 and in March 1991. In 1990, two shovel tests excavated in the site locus revealed that the topsoil had been removed to sterile clay (25 cm x 25 cm x 20 cm).

The total site area is 100 m². The site has been disturbed by bulldozing (see Figure 8-143). Ground surface visibility at the site was excellent and four whole flakes, one utilized flake, one biface fragment, one core, shell, and fire-cracked rock were collected from the surface. The historic artifacts that were collected include one bottle glass fragment, one axe, and two skeet fragments. These isolated items do not relate to any domestic use, but suggest lumbering and target practice in the area.

Recommendations

No temporally diagnostic artifacts were collected, and the age of occupation is classified as being undifferentiated Prehistoric. Site function

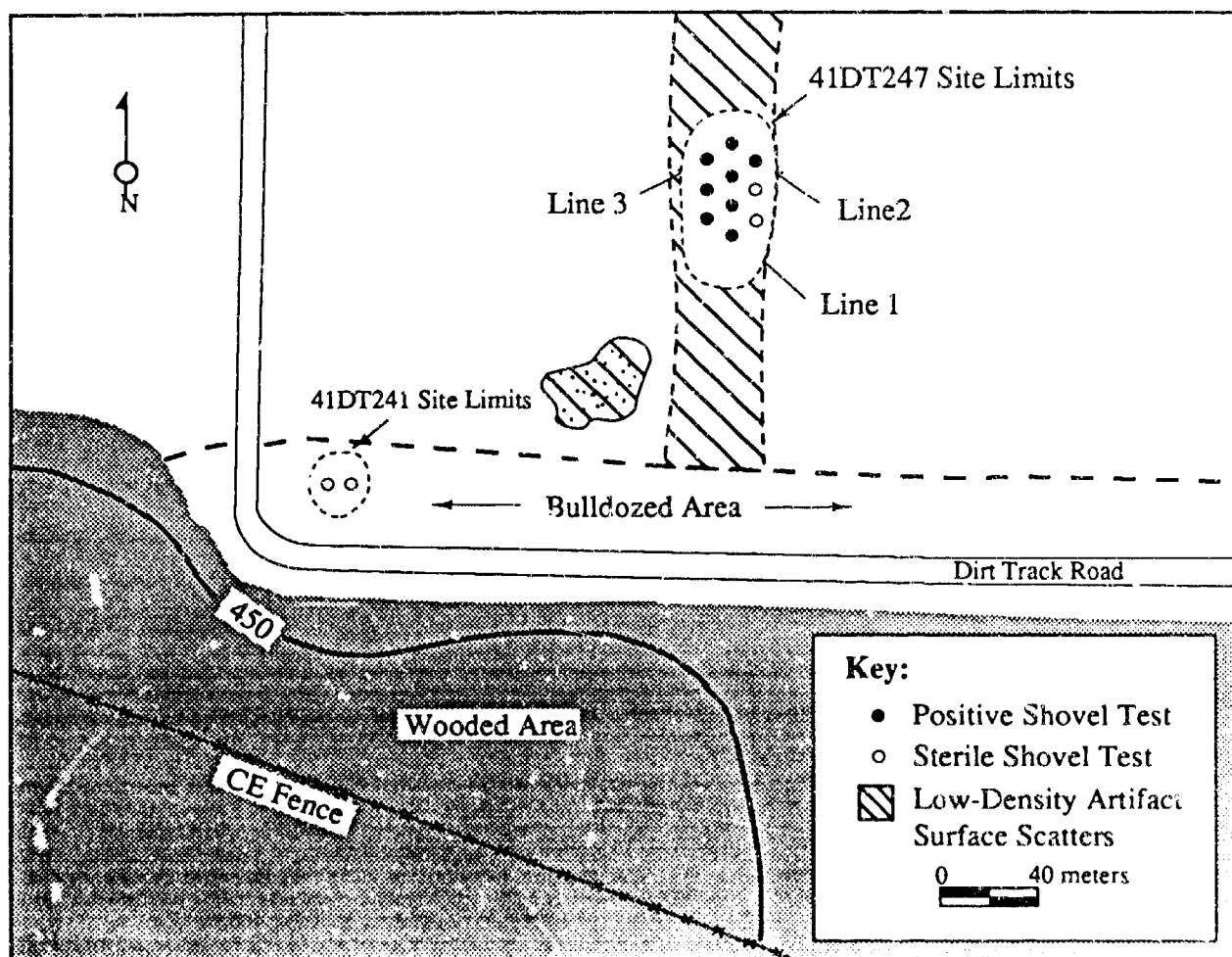


Figure 8-143. Plan of sites 41DT241 and 41DT247, showing locations of shovel tests, surface artifacts and features, and site limits.

is thought to have been for lithic reduction. Because of low artifact density and extensive site disturbance, this property has low potential to address material culture, chronological, and settlement questions outlined in the Research Design. The site is deemed to be clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT242

This newly recorded prehistoric site (Figure 8-144) is located in a slope/upland setting on a remnant knoll 160 m (524.8 ft) south of an

unnamed tributary of Johns Creek. The site is 1.2 km (0.75 mi) north of the South Sulphur River. The elevation at the site is 134 m (440 ft) above msl, and the mapped soil type is Normangee clay loam. In its native state, this was a floodplain forest. The area has been cleared and intensively cultivated in the past and is in fallow pasture today.

Stratigraphy

The single soil stratum identified at site 41DT242 is a dark brown (10YR3/3) clay loam. All prehistoric materials were derived from this stratum, which is continuous across the site area. This stratum varies in thickness, averaging 18 cm in depth. It extends from the modern ground

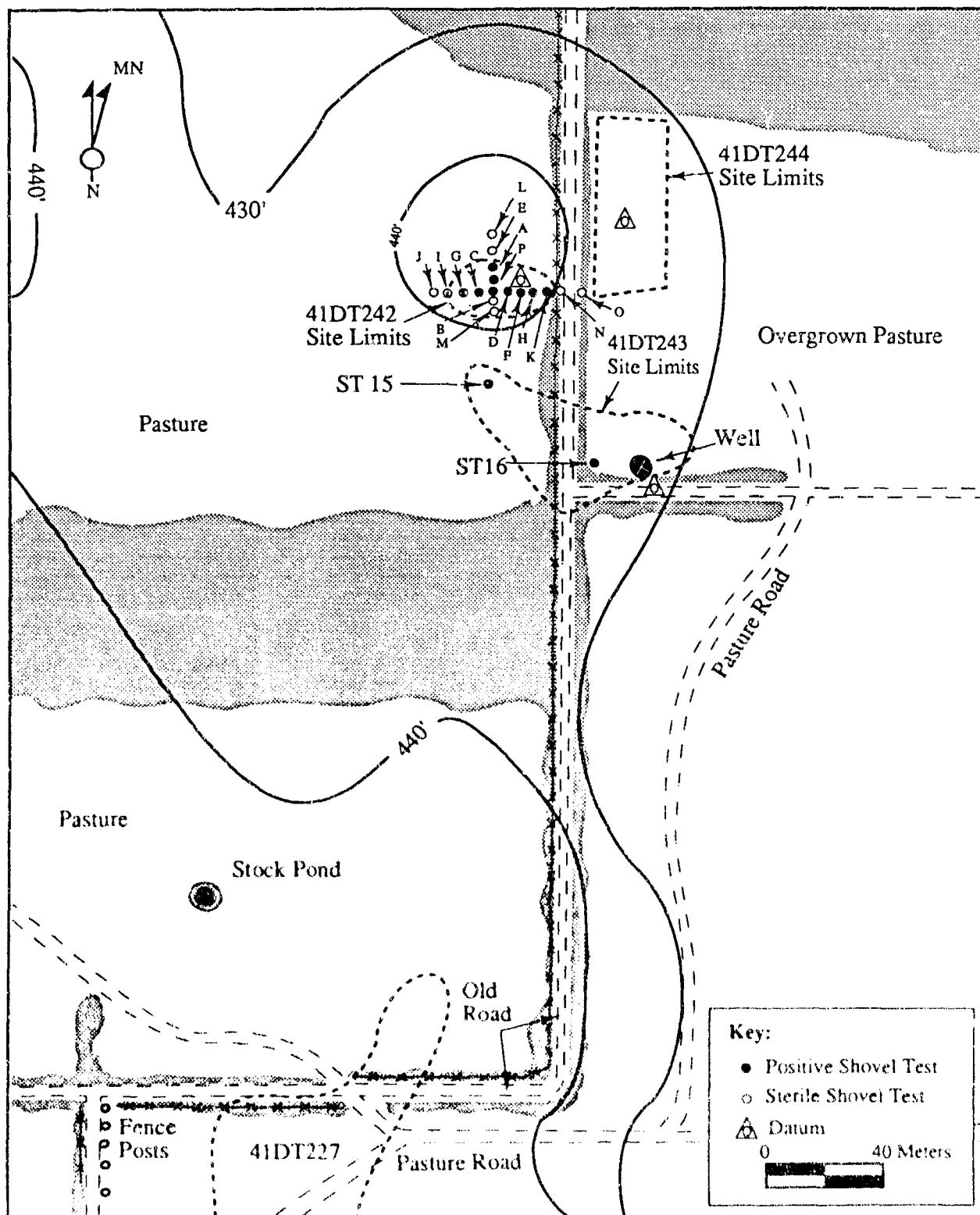


Figure 8-144. Plan of sites 41DT242, 41DT243, and 41DT244, showing locations of shovel tests, surface artifacts and features, site limits, and land disturbances. Note site 41DT227 to the south.

surface to a maximum excavated depth of 40 cm below ground surface.

Archival Information

Site 41DT242 (as with sites 41DT227, 41DT228, 41DT229, 41DT230, 41DT231, 41DT243, and 41DT244) is located on the B. N. Ball (A-254) Survey. This 331.9 ha (820 acre) grant was patented to Ball in 1860 (Delta County Deed Book 33: 345).

In 1936, the tracts containing sites 41DT242, 41DT243, and 41DT244 were located on an 24.4 ha (85 acre) property belonging to Ella Weaver. She obtained the property in 1923 for \$4,740 (Delta County Deed Book 54: 40). In 1936, the property had depreciated to \$690. No houses were present at that time. Approximately 33 ha (81 acres) were in cultivation (10.5 ha [26 acres] in grain and the remainder in cotton) and 1.6 ha (4 acres) were woodland.

Archaeological Investigations

The site was first identified within shovel tests spaced at 30 m intervals over an area of 150 m². The site boundaries were determined via the excavation of two transects (one oriented north-south and the other oriented east-west) of shovel tests spaced at 5 m intervals (see Figure 8-144).

The excavation units which produced the majority of artifacts were Shovel Test D (one biface, three fire-cracked rocks, two cores, two flakes, and two modified flakes), ST H (six flakes and one fire-cracked rock), and ST F (three fire-cracked rocks, one modified flake, and one broken flake). Shovel Test A produced one fire-cracked rock, one modified flake, and one flake; and ST K produced two flakes. Units with single items include ST C (one flake) and ST G (one flake).

Recommendations

No temporally diagnostic artifacts were recovered from the site. The site is of unknown prehistoric age. The artifact assemblage suggests that site function may be related to lithic reduction. The site is considered to be clearly not

eligible (Category III) for nomination to the National Register because it fails to meet the criteria of significance. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT243

This newly recorded historic site (see Figure 8-144) is located in a slope/upland setting 480 m (1,574.4 ft) south of Johns Creek and 3.2 km (2 mi) southeast of Klondike. Elevation at the site varies between 131 m (430 ft) above msl and 134 m (440 ft) above msl, and the mapped soil type is Normangee clay loam. The area has been cleared and intensively cultivated in the past and is in fallow pasture today.

Stratigraphy

The single soil stratum identified at site 41DT243 is a dark brown (10YR3/3) clay loam. All prehistoric materials were derived from this stratum, which is continuous across the site area. This stratum varies in thickness, averaging 18 cm in depth, but extends to a maximum excavated depth of 40 cm below ground surface.

Archival Information

Site 41DT243 (as with sites 41DT227, 41DT228, 41DT229, 41DT230, 41DT231, 41DT242, and 41DT244) is located on the B. N. Ball (A-254) Survey. This 331.9 ha (820 acre) grant was patented to Ball in 1860 (Delta County Deed Book 33: 345).

In 1936, the tracts containing sites 41DT243, 41DT242, and 41DT244 were located on a 34.4 ha (85 acre) property belonging to Ella Weaver. She obtained the property in 1923 for \$4,740 (Delta County Deed Book 54: 40). In 1936, the property had depreciated to \$690. At that time, ca. 33 ha (81 acres) were in cultivation (10.5 ha [26 acres] in grain and the remainder in cotton) and 1.6 ha (4 acres) were in woodland. A 5.4 ha (13.3 acre) portion of the tract had been terraced. No houses were present. Roads were shown in the vicinity of site 41DT243 on the 1914 Levee

Improvement District Map, but no houses were indicated. In 1941, two houses were shown in the vicinity of sites 41DT243 and 41DT244.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The site area is 3,000 m² (32,292 ft²). The only feature observed at the site is a cistern lined with machine-made brick. The brick employed in its construction is DIAMOND brick, dating ca. 1910-1923. No dwelling or outbuilding remains were visible at the site (see Figure 8-144). Two shovel tests (35 cm x 35 cm x 20 cm) were excavated west and northwest of the cistern. Machine-made brick and one clear glass fragment were recovered in ST 15. The second shovel test (ST 16) near the well yielded one piece of whiteware and one clear bottle glass sherd. All items date to the twentieth century.

Recommendations

Only roads are shown in the vicinity of site 41DT243 in 1914, and no houses were present in 1936. A house appears in the vicinity on the 1941 highway map. Informant Jeff Blandon could not recall the name of the occupant. Archival and informant researches indicate that there is little historical value attached to this property. This site is considered to be clearly not eligible (Category III) for nomination to the National Register. Further investigations would in all likelihood yield redundant information on twentieth century farmsteads. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT244

This newly recorded historic site (see Figure 8-144) is located on an isolated knoll 380 m (1,246.4 ft) south of Johns Creek and 3.12 km (1.94 mi) southeast of Klondike. Elevation at the

site is 137 m (435 ft) above msl, and the mapped soil type is Normangee clay loam. The area has been cleared and intensively cultivated in the past and is in fallow pasture today.

Stratigraphy

The single soil stratum identified at site 41DT244 is a dark brown (10YR3/3) clay loam. All prehistoric materials were derived from this stratum, which is continuous across the site area. This stratum varies in thickness, averaging 18 cm in depth, but extends to a maximum excavated depth of 40 cm below ground surface.

Archival Information

Site 41DT244 (as with sites 41DT227, 41DT228, 41DT229, 41DT230, 41DT231, 41DT242, and 41DT243) is located on the B.N. Ball (A-254) Survey. This 331.9 ha (820 acre) grant was patented to Ball in 1860 (Delta County Deed Book 33: 345).

In 1936, the tracts containing sites 41DT244, 41DT242, and 41DT243 were located on an 34.4 ha (85 acre) property belonging to Ella Weaver. She obtained the property in 1923 for \$4,740 (Delta County Deed Book 54: 40). In 1936, the property had depreciated to \$690. At that time, ca. 33 ha (81 acres) were in cultivation (10.5 ha [26 acres] in grain and the remainder in cotton) and 1.6 ha (4 acres) were woodland. A 5.4 ha (13.3 acre) portion of the tract had been terraced. No houses were present.

Roads were shown in the vicinity of site 41DT244 on the 1914 Levee Improvement District Map, but no houses were indicated. In 1941, two houses were shown in the vicinity of sites 41DT243 and 41DT244. Informant Jeff Blandon could not recall who lived at the site.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these materials were mapped and assessed as to their age.

The total site area is 1,800 m² (19,375 ft²).

No subsurface or structural features are present at the site (see Figure 8-144). A surface scatter of automobile parts, sheet metal, brick, stoneware, bottle glass, and whiteware was recorded. One cork top clear glass bottle was collected from this area. The remains of a 1920s or 1930s automobile are scattered across the site.

Recommendations

Although roads were shown in the vicinity of site 41DT244 in 1914, no house was indicated. No house was present in 1936, but a house was shown in this vicinity on the 1941 highway map. This site is thought to be clearly not eligible (Category III) for nomination to the National Register. Further investigations would in all likelihood yield redundant information. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT245

This newly recorded historic site is located in a floodplain setting at a drainage crossing, 680 m (2,230.4 ft) east of FM 1531 and 850 m (2,788 ft) south of the channelized Middle Sulphur River. Elevation is 135.6 m (445 ft) above msl, and the mapped soil type is a Guyton silt loam. In its native state, this area was a floodplain forest.

Stratigraphy

The Guyton soil series consists of deep loamy soils which have formed in floodplain alluvium. Several B soil horizons (B21 to B24) are present, and extend over 1.83 m below ground surface. Two soil horizons are present which comprise the modern plow zone. The plow zone extends to 40 cm below ground surface.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

This site is unique in that it represents the reuse of an iron cylinder, a possible locomotive boiler, which was recycled as a culvert. This item measures 5.1 m in length, 1.65 m in diameter, and the walls are 2 cm thick. It is constructed of iron plates held together by large rivets. The heads of the rivets measure 4-5 cm in diameter. Three orifices are visible on the cylinder. The largest orifice is 50 cm x 30 cm, and is surrounded by an iron reinforcement plate riveted to the exterior of the cylinder. It is located 1 m from the north end of the cylinder. A small orifice is located nearly equidistant from the ends of the cylinder, and measures 25 cm x 30 cm. It also is surrounded by an iron reinforcing plate, attached to the exterior of the cylinder with iron rivets. A small threaded hole is located 1 m south of this orifice.

Recommendations

This iron cylinder is thought to be a boiler, either from a steam locomotive or from an industrial facility. This unique technological artifact has been recycled possibly as a drainage culvert and is not in its original context. Nothing about this property indicates that it is significant under Criteria A, B, C, or D. It is considered to be clearly not eligible (Category III) for nomination to the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT246

This newly recorded historic site (see Figure 8-107) was known as the Free Hope Baptist Church. It is located in a slope/upland setting at the northeast corner of the intersection of FM 1528 and an unnamed dirt road, 1.86 km (1.16 mi) south of Klondike. Elevation is 138.4 m (454 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this was a post oak savannah with upland prairie to the northwest.

Stratigraphy

Two natural soil strata were exposed in eroded areas and road cuts at site 41DT246. These

strata are discussed in order from the older (lower) to younger (upper). Stratum I is the upper B soil horizon. It is a brown (10YR4/3) clay with a clear wavy upper boundary at 18 cm below ground surface. It was exposed in profile to a depth of 40 cm below ground surface. Stratum I is culturally sterile and is exposed by erosion and bulldozing over 60% of the site area.

Stratum II is the surface soil horizon. It is a very dark grayish brown (10YR3/2) loam. It varies in depth from 0-18 cm below the present ground surface. All historic materials at the site are derived from Stratum II.

Archival Information

Site 41DT246 is located on the J. B. Bowman (A-20) Survey. It was not shown on the 1914 Levee Improvement District Map. It was also not mentioned in the 1936 WPA survey, nor was it shown on the 1941 highway map. It is shown on the 1951 aerial map for the soil survey (Resse et al. 1979). The dimensions of the church suggest a rectangular building measuring approximately 10 m x 20 m. Informant interviews indicate that a Baptist congregation worshipped here. Jeff Blandon recalled that the church was moved to the site from a location ca. 1 km (0.6 mi) east of the later site across from the Derrick house.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

Total site area is 1,600 m² (17,222 ft²). No standing structures are present at the site. A scatter of machine-made brick, including the GROESBECK, FERRIS (1895-1970s), KING B, and STANDARD brands, along with concrete drain pipes, is located on the western side of the site (see Figure 8-107). A scatter of asphalt shingles, tar paper, wire nails, and wooden planks is located near the northeast corner of the site, and may represent building materials from the church. Another pile of wooden planks was recorded in the southeast corner of the site.

Recommendations

Site 41DT246 was used for religious worship from the 1950s to the 1970s. Although this site was a focal point for the Baptist congregation in the Friendship African American community, its archaeological integrity has been severely impacted by bulldozing. This site is considered to be clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT247

This newly recorded prehistoric site (see Figure 8-143) is located in the modern floodplain of the South Sulphur River, 500 m (1,640 ft) west of that river. It is 470 m (1,541.6 ft) south of an intermittent stream that flows into the South Sulphur River and is 750 m (2,460 ft) northeast of S.H. 71. Elevation at the site is 135.6 m (445 ft) above msl, and the mapped soil type is Annona loam.

Stratigraphy

Three natural strata were identified at the site. These are described below from oldest (lowest) to youngest (uppermost).

Stratum I appears only in the deep test probe (Probe 1 in Transect 1) excavated at the site, but is assumed to be continuous across the site locus. Vertically, its upper boundary occurs at a depth of 24 cm (9.44 in) below ground surface and extends to a maximum excavated depth of 30 cm (11.81 in) below ground surface. Stratum I is a culturally sterile, very compact, sticky clay with well-developed peds that are subangular to blocky. It is devoid of small pebbles, gravel, or stone fragments and exhibits no internal stratification. The dominant color is a dark yellowish brown (10YR4/5).

Stratum II occurs in all shovel test probes and is assumed to be horizontally continuous across the study area. Vertically, its upper boundary varies from 12 cm (4.72 in) below ground surface to 20 cm (9.44 in) below ground surface. Stratum II is a culturally sterile, very dark and compact silt,

with very fine interbedding of silt laminae that may represent flooding or seasonal ponding episodes. It is devoid of pebbles, gravel, or stone fragments. It is separated from underlying Stratum I by a clear, smooth interface or boundary, but has an undulating, "scalloped" interface with overlying Stratum III.

Stratum III is horizontally continuous across the study area. Vertically, it occurs from ground surface to a minimum depth of 12 cm (4.72 in) below ground surface and extends to a maximum excavated depth of 20 cm (7.87 in) below surface. Stratum III is a very fine, powdery silt containing many organics and forage root systems in its upper limits. Stratum III exhibits no internal stratification and is devoid of pebbles, gravel, or stone fragments. The dominant color is a light yellowish brown (10YR6/4). It is separated from underlying Stratum II by an undulating, "scalloped" interface. Stratum III is a modern plow zone.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at the site included

5-m interval pedestrian survey and mapping. A single unit (35 cm x 35 cm x 15 cm) excavated for the site datum was culturally sterile.

The total site area is 1,200 m². Artifacts were collected from the surface of the site, which had sparse vegetation. Artifacts collected include a possible Steiner arrow point, five whole flakes, two utilized flakes, four cores, three early aborted bifaces, one tested cobble, and fire-cracked rock.

Site 41DT247 was revisited in March 1991 (see Figure 8-143). The additional investigations undertaken at site 41DT247 defined three natural strata. Aboriginal cultural resources recovered from this site during these excavations consist of some 84 items, including projectile points, bifaces, unifacially modified primary and secondary biface thinning flakes, and modified primary core trimming flakes (Table 8-23). These artifacts reflect generalized aboriginal activity including the manufacture and/or refurbishing of stone tools that represent all phases in the lithic reduction sequence. Although the artifacts generally reflect an occupation or series of occupations at some indeterminate time in the past, the presence of a possible Steiner point (Figure 8-145) suggests

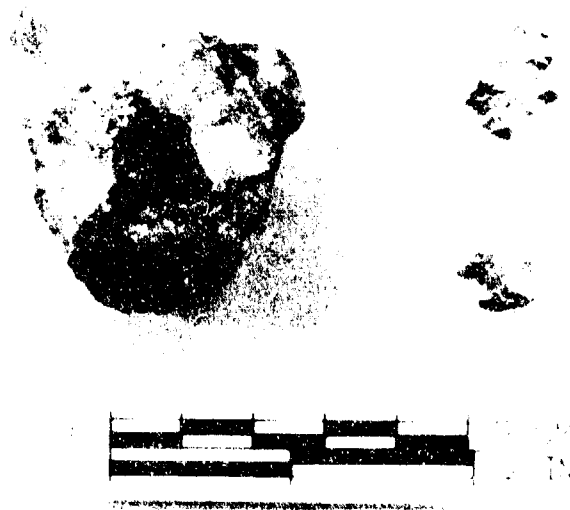


Figure 8-145. Flaked stone artifacts from site 41DT247, Delivery Order Number 7 study area. Left: biface fragment (surface). Right (top-bottom): untyped refined biface (surface) and untyped projectile point fragment (surface).

TABLE 8-23

Distribution of Flaked Stone Artifacts from 41HP247, Delivery Order Number 7 Study Area,
by Excavation Unit, Arbitrary Level, Raw Material Type, and Artifact Technotype

Excavation Unit	Stratum	Level	Cores and Core Fragments	Primary Core Trimming Flakes	Secondary Core Trimming Flakes	Tertiary Core Trimming Flakes	Bifaces and Biface Fragments	Primary Biface Thinning Flakes	Secondary Biface Thinning Flakes	Tertiary Biface Thinning Flakes	Projectile Points/Point Fragments	Specialized Implements	Non-Diagnostic Shatter	Total
LINE 1														
Probe 3	III	0-10 cm	—	—	—	—	—	—	2	1	—	—	—	3
LINE 2														
Probe 1	III	0-10 cm	—	—	1	—	—	1	2	1	—	1 ^a	3	9
Probe 2	III	0-10 cm	—	—	—	—	—	3	1	2	—	—	4	10
Probe 3	III	0-10 cm	—	—	—	—	—	1	—	1	—	1 ^b	3	6
Probe 4	III	0-10 cm	—	—	—	—	—	—	2	—	—	—	2	4
LINE 3														
Probe 1	III	0-10 cm	—	—	1	—	—	3	2	1	—	2 ^c	7	16
Probe 2	III	0-10 cm	—	2	—	—	—	1	2	2	—	1 ^d	6	14
Probe 3	III	0-10 cm	—	1	—	—	—	2	1	1	—	—	2	7
		10-20 cm	—	—	1	—	—	2	—	—	—	—	1	4
General Collection	Surface	—	—	1	—	2 ^e	4	—	—	1 ^f	—	2 ^g	11	—
SUBTOTAL: RAW MATERIALS														
Fine-grained ^h		N	—	2	4	—	2	17	12	9	1	7	19	73
Ogallala Quartzite		%	—	2.7	5.0	—	2.7	23.3	16.4	12.3	1.4	9.6	26.0	100.0
Medium-grained ^h		N	—	1	—	—	—	—	—	—	—	—	10	11
Ogallala Quartzite		%	—	9.1	—	—	—	—	—	—	—	—	90.9	100.0
TOTAL			—	3	4	—	2	17	12	9	1	7	29	84
PERCENT OF TOTAL			—	3.6	4.8	—	2.4	20.2	14.3	10.7	1.2	8.3	34.5	100.0

a uniaxially modified primary core trimming flake

b uniaxially modified secondary biface thinning flake

c two uniaxially modified secondary biface thinning flakes.

d uniaxially modified primary core trimming flake

e one initial-edged biface fragment, and one secondary-thinned biface fragment

f small triangular, corner-notched projectile point (extensively resharpened)

g two uniaxially modified primary biface thinning flakes

h see discussion of raw material for 41HP159

NOTE: Ten formed tools and seven pieces of debitage show utilization. One formed tool shows thermal alteration.

Late Prehistoric ascription for this locality. Our pedestrian reconnaissance revealed a diffuse scatter between sites 41DT247 and 41DT241, 120 m (393.7 ft) to the southwest. It is possible these two apparently separate site loci may be portions of what was originally a single, much larger site. No prehistoric cultural features were observed during the pedestrian reconnaissance or the subsurface testing procedures.

Recommendations

Based on the pedestrian reconnaissance, subsurface testing, and diversity of the artifactual assemblage, it is our opinion that potentially significant cultural resources are preserved at this site. The site is classified as Category II, and we recommend an intensive pedestrian reconnaissance with all observed artifacts marked or flagged for precise mapping, subsequent collection, and analysis. Also, the apparently undisturbed wooded area of higher elevation that is immediately to the south of sites 41DT247 and 41DT241 should be subjected to archaeological survey which specifically should include subsurface testing.

Site 41DT248

This newly recorded historic site is located on the eastern slope of the foothills above the South Sulphur River floodplain. The river flows 1 km (0.6 mi) south-southeast of the site. The site is 1.9 km (1.2 mi) due east of FM 1531 and immediately south of a west-trending dirt road originating at Horton. The CE boundary fence is 30 m (98.4 ft) west of the site. Elevation at the site is 141.7 m (465 ft) above msl, and the mapped soil type is Woodtell loam. In its native state, this was a post oak savannah.

Stratigraphy

A single natural soil stratum and a redeposited layer of sterile fill, possibly from the excavation of the well, were identified at site 41DT248. The natural soil stratum is an A soil horizon. It is a very dark, grayish brown (10YR3/2) loam extending 10 cm below surface.

The redeposited soil stratum overlies the natural A soil horizon. This is a grayish brown

(2.5Y5/2) clay with yellowish brown (10YR5/6) mottles. This stratum was identified 5 m northwest of the well, in the unit which was excavated for the site datum.

Archival Information

Site 41DT248 is located on the James Tadlock Survey (3-527), which was patented to his heirs on 30 December 1853. His heirs testified that he had resided on the property until his death. The tract was transferred to David Anders in September 1858. Site 41DT248 is clearly not the James Tadlock farmstead, since all features and material culture remains are less than 50 years old.

In 1914, roads were shown in the vicinity, leading to the intensively cultivated floodplain. The 1936 survey was not available for this tract. The house is not shown on the 1941 highway map or the 1975 aerial survey (Ressel et al. 1979), but it is on the 1964 USGS map. The site's remote setting may have led to its omission in 1941.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey. A single excavation unit (35 cm x 35 cm x 15 cm) was excavated 5 m north-northeast of a cistern noted at the site.

The site consists of a cistern lined with machine-made brick. Machine-made brick, metal siding fragments, and metal litter the site. No surface collection was made at the site since all items observed were less than 50 years old.

Recommendations

A house is shown at this site on the 1964 map of the area, but no visible remains of a structure are present. Occupation of the site is estimated at mid- to late twentieth century. Due to the disturbance of the site and its recent age, this site has no potential to address the research questions outlined in the Research Design. It is considered clearly not eligible (Category III) for the National Register. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT249

This newly recorded historic site is located on a slope 350 m (1,148 ft) north of Honey Creek and 500 m (1,640 ft) northwest of the Free Hope Church site. Elevation at the site is 139 m (455 ft) above msl, and the mapped soil type is Crockett loam. In its native state, this area was a post oak savannah with an upland prairie to the north.

Stratigraphy

A single soil stratum was identified at site 41DT249. This is the A-horizon of the Crockett loam. It is a very dark, grayish brown (10YR3/2) loam. All historic artifacts are assumed to be derived from this stratum.

Archival Information

Site 41DT249 is not shown on the 1914 Levee Improvement District Map, the 1941 highway map, or the 1964 USGS map. Since it is so far removed from a maintained road, it could have been missed. It is not evident on the 1975 aerial survey (Ressel et al. 1979), but the stock tank and fence lines are visible.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 at this site included 5 m interval pedestrian survey and mapping. Since the site and its boundaries were evident from surface remains, these were mapped and assessed as to age.

The total site area is 10,400 m² (2.6 acres). Features present at the site consist of a pile of sheet metal and wooden planks located in the southeast corner of the site, a stock pond in the southwest corner, a small collapsed outbuilding near the center of the site, another stock pond in the northwest corner of the site, and a rectangular depression (possibly the remains of a storm cellar) located in the northeast corner of the site.

The artifact assemblage collected from the ground surface consists of 16 items: two stonewares, 11 bottle glass fragments, two pieces of table glass, and a metal door knob and plate with attached wire nails. The stonewares date

between 1890 and 1930. Four of the bottle glass fragments were made by an automated bottling machine and date from 1910 to the present. One medicine bottle was embossed with "McElree's Cardui The Chattanooga Medicine Co." and another with "Carbena". One soda bottle was embossed with "City Beverages," and another with "Commerce Bottling and Manufacturing Co. Commerce, Texas," and a third with "City Beverage, Paris, Texas."

Recommendations

Site 41DT249 was apparently occupied from the early to mid-twentieth century. It is considered to be clearly not eligible (Category III) for nomination to the National Register. Additional investigations would in all likelihood yield redundant information since this property type is the most commonly represented one in the Cooper Lake study area.

Site 41DT260

This newly recorded historic site is located in an upland setting 2.6 km (1.6 mi) southeast of Klondike and 2.7 km (1.7 mi) southwest of Liberty Grove. The site is situated on a Wilson silt loam soil at 132.5 m (434 ft) above msl. In its native state, this was upland prairie.

Stratigraphy

A single natural soil stratum was identified at site 41DT260. This is a very dark gray (10YR3/1) clay loam. It was excavated to a maximum depth of 30 cm below ground surface. All cultural materials were derived from this stratum.

Archival Information

A house is shown in the general vicinity of site 41DT260 on the 1914 Levee Improvement District Map. It is also shown on the 1941 highway map. A barn symbol is shown on the 1964 USGS map.

Site 41DT260 is located in the Loftin Vess (A-445) Survey. This 134.8 ha (333 acre) tract was granted to Vess in 1861 (Delta County Deed Book 33:97).

In 1936, site 41DT260 was located on a 33.4 ha (82.5 acre) tract owned by Mrs. A. P. Miller of Cooper. She obtained the property in 1924 for \$5,000 (Delta County Deed Book 54: 575). In 1936, the property had depreciated to \$825. At that time, 0.8 ha (2 acres) was reserved for a home, 21.9 ha (54 acres) were in cultivation (4 ha [10 acres] in corn and oats, and 17.8 ha [44 acres] in cotton), 4 ha (10 acres) were in pasture, 4 ha (10 acres) were in woodland, and 2.6 ha (6.5 acres) were wasteland.

Mrs. Miller leased the farm to tenants. The dwelling was a 28 ft x 26 ft, one-story, gabled structure with four rooms. It was of box and strip construction.

Archaeological Investigations

Fieldwork conducted under the terms of Delivery Order Number 7 included close interval pedestrian reconnaissance, mapping, and photography. A single shovel test (25 cm x 25 cm x 30 cm) was excavated, but was sterile. A permanent datum was placed in this unit.

Site 41DT260 consists of several structural ruins and surface features. A collapsed one-story, box and strip frame house with an L-shaped floor plan was the central structure. Wire nails were used in its construction. A standing pole barn is situated 50 m northwest of the house. A machine-made brick (twentieth century) well is located near the barn. An oval depression (12 m²), possibly a collapsed hand-dug well, is situated 6 m northeast of the house. Machine-made brick fragments cover the entire core area of this site. Two soda pop bottles marked "RC" with a 1936 patent date and a "Dr. G. Food Fov, Paris,

Texas" were recovered. All artifacts from the site date to the twentieth century.

Recommendations

Archival and informant researches do not indicate any historic significance for this site. The site is deemed clearly not eligible (Category III) for nomination to the National Register. Further investigations would in all likelihood yield redundant information on this common property type. If future information is found that warrants additional consideration, this site will be reevaluated for National Register eligibility. No further work is recommended at this time.

Site 41DT261

This newly recorded upland site is located east of Klondike on a ridge point overlooking Johns Creek. The site is at 137 m (450 ft) above msl on an Annona loam soil. In its native state, this area was a slope forest, with upland prairie to the west and floodplain forest to the east.

Archaeological Investigations

Site 41DT261 was reported and recorded after the completion of fieldwork. A single biface was recovered in a recently graded area where fill had been removed for construction of FM 1528.

Recommendations

Site 41DT261 has been totally destroyed. It is deemed clearly not eligible (Category III) for the NRHP. No further work is recommended.

Interviews with Informants and Avocational Collectors

Jeffery Bohlin

9

INTRODUCTION

The scope of work for Delivery Order Number 7 called for the interview of at least 15 individuals who could potentially provide information on avocational and/or commercial archaeological collections from Cooper Lake or surrounding areas. This task, conducted in conjunction with the fieldwork for Delivery Order Number 7, provided important results but little information on the Cooper Lake area specifically. This scarcity of data is possibly due to the relative lack of farming—and concomitant lack of exposure of subsurface cultural deposits—in the Cooper Lake area since it was purchased by the government in the 1970s, as well as the obscuration of site ground surfaces by vegetation and alluviation. Areas removed from Cooper Lake that have gained more visible archaeological deposits, on the other hand, have attracted greater attention on the part of avocational and commercial collectors.

METHODS

This project consisted of verbal, in-person interviews with avocational and commercial collectors. Names of some individuals were provided by the U.S. Army Corps of Engineers (CE) personnel. Other names were obtained from

professional and avocational archaeologists who were familiar with northeastern Texas.

The first step in this process was to establish confidence with the informant. Collections were viewed and then photographed, if permitted. Permission was granted for the photography of only two collections. Even when collectors displayed their artifacts, many individuals refused to provide site provenience data, and all were reluctant to sign the release forms required by the CE. The principal concern of these individuals was fear of prosecution by the federal government, even though their collections may have been made prior to federal land acquisition or were derived from private lands removed from Cooper Lake.

The initial phase of work was to contact the established archaeological societies. The group closest to the Cooper Lake area is the Paris Archaeological Society, which has been in contact with ARP since 1987. The individuals who were contacted in this area include Kimberley Clark, John Fisher, Rick Posten, and Dennis Smith. Mr. Skip Steeley, also of Paris, was interviewed on several occasions concerning early historic settlement and the movement and settlement of immigrant Native Americans in northeast Texas.

In Cooper, a number of interested avocational archaeologists also were interviewed. Through these visits, William Young and ARP staff aided in the establishment of a new archaeological

society, the Cow Hill Interspection People (CHIP). This group held weekly meetings with the ARP field director between April and November 1988, in which members and other associated individuals were called upon to show their collections. However, few individuals revealed their entire collections and reported site locations, perhaps due in part to fear of competition as well as prosecution. Unfortunately, many who could recall the general locations of specific finds did not have reliable or precise provenience data.

In general, members of CHIP have a sincere interest in the proper recordation and evaluation of prehistoric sites in the area. It is important to recognize that artifact collecting from both public and private lands is a serious problem in northeastern Texas and will continue in the absence of efforts to educate the public on the value and significance of archaeological sites. It is suggested that the media be provided with information regarding the significance of all archaeological sites, and the state and federal legislation in existence which pertain to such resources.

RESULTS

Late Pleistocene/Early Holocene Paleontological Resources

The first documentation of late Pleistocene and early Holocene paleontological resources for this area was Slaughter's (1964) evaluation of the North Sulphur River and the Cooper Reservoir. Slaughter's (1964) work on the North Sulphur led him to name and describe the Ben Franklin fauna, a late Pleistocene mammalian fauna recovered from near the town of Ben Franklin.

Subsequent work in the area has been done by members of the Earth Sciences Department of East Texas State University, the Dallas Museum of Natural History, and other paleontologists. Along the channelized North Sulphur River, skeletal remains of mammoths have been found between Ladonia and Paris. Although these finds have not been carefully documented, it appears that they represent the redeposited remains of late Pleistocene animals.

Most recently, during the fall of 1989, the remains of an Imperial Mammoth were excavated

by the Dallas Paleontological Society under the direction of Charles Finsley of the Dallas Museum of Natural History. This find was located approximately 1,300 m (4,264 ft) upstream from the F.M. 904 bridge over the North Sulphur River. The site was visited by ARP personnel, who observed that the site sediments were not screened and that no systematic approach for recovering artifacts was employed by the excavators. Dallas Paleontological Society members later indicated that one of the long bones of the mammoth was burned and that charcoal was associated with another one of the bones. It appears that no charcoal samples were collected from the find. The age of this find and the possibility of cultural associations are unknown at this time.

Mallory Creek Paleontological Locus

During the summer of 1989, informant John Shultz excavated the skull and tusks of a mastodon on Mallory Creek, near Howland, Lamar County, Texas. Tusks of the animal were found ca. 6.7 m (22 ft) below modern ground surface in the bank of the channelized stream, ca. 1 km (0.6 mi) north of the North Sulphur River. Two sections of tusks, cranial fragments, four teeth, and one rib were excavated by Mr. Shultz. While excavating the skull, which was submerged under water, Shultz noticed artifacts that were possibly associated with the skull.

Fifteen artifacts were collected from the fill surrounding the mastodon skull. Notable among them was a stemmed dart point made from Arkansas novaculite with lateral grinding on its stem (Figure 9-1). The tip of another dart point or biface made from novaculite was also found. A fragment of a large scraper made from Edwards Plateau chert was also discovered with the skull. The remaining artifacts are scrapers of exotic chert and one of petrified palm wood. The majority of these artifacts were found in the sediment that was surrounding and inside of the skull. All of the artifacts were made from non-local materials. After the excavation, Mr. Shultz contacted the author.

The site was visited by ARP personnel along with Dr. David Meltzer of the SMU Anthropology Department and Mr. Shultz. The area was also



Figure 9-1. Artifacts from fill surrounding mastodon skull find on Mallory Creek near Howland, Lamar County, Texas.

examined by Dr. Reid Ferring, University of North Texas, and by Dr. S. Christopher Caran, consulting geomorphologist for the Delivery Order Number 7 project. Both Ferring and Caran indicated that they thought the mastodon skull might not have been in its original depositional context, and suggested that further excavation be conducted to discover any other elements that may be present and to determine whether artifacts were associated with the find.

With volunteer help, the mastodon site was surveyed, and the depth below the surface was determined. Through the 2 m (6.6 ft) of overburden, a 1.2 m x 1.3 m (3.9 ft x 4.3 ft) unit was excavated down to the depth of the mastodon skull. Recent historic artifacts were found to have been mixed in with the sediments stratigraphically above the sediments that contained the skull.

The silty clay deposit from which Mr. Shultz excavated the skull does not appear to have been contaminated by more recent sediments. Excavations through the silty clay continued until the water table was reached. The few fragments of mastodon bone recovered from these deposits were carefully removed by trowel. The sediments were not screened.

Further work remains to be done at the mastodon site. Future work may involve the use of a backhoe or front-end loader for the removal of 2 m (6.6 ft) of overburden to determine whether any other cranial remains and/or artifacts are present. Several vertebrae and a single long bone recently found immediately downstream from the skull may be from the same animal, perhaps indicating that other bones of this mastodon may be present at the site. Based on this evidence, the

deposit appears to be lag gravel filling a late Pleistocene stream channel.

Other late Pleistocene mammals have been found in the channelized South Sulphur River near Commerce. A mammoth pelvis, musk ox skull, and elk (red deer) antlers have been found in the river by Mr. Shultz and other paleontologists.

Isolated finds of proboscidean bones have been documented on the North Sulphur River by John Shultz, Kenneth Bush, Vergil McFadden, Johnny Banks, Bob Slaughter, and Charles Finsley. It is considered to be highly likely that other proboscidean remains have been found in this area and have not been reported. In nearly all cases, information concerning the stratigraphic and sedimentological context of these finds is non-existent. There is an urgent need for professional involvement with collectors to adequately document these finds.

Within this region, East Texas State University's Earth Sciences Department has collections of mammoth, four-pronged antelope (*Tetromeryx shuleri*), bison, camel, and possibly a large cat from Lake Tawakoni. Informant Jimmy Ross has reported to ARP personnel that a possible "bone bed" is located on a lake near Sulphur Springs.

Outside of the immediate area, two collectors each have a bison skull, possibly *Bison antiquus*, from a locality on Denton Creek. When questioned about these finds they would only state that the skulls were found in a gravel bar on the creek, at the base of a high promontory overlooking the creek. They speculated that there may have been a bison jump near where they found the skulls. Unfortunately, neither of these individuals would disclose the location of the find or information concerning site locations in the area.

In summary, there is a vast pool of information available concerning terminal late Pleistocene/early Holocene paleontological finds in northeastern Texas. It is possible that some of these finds may be related to Paleo-Indian occupation of this area. Unfortunately, due to insufficient documentation by paleontologists and avocational collectors, there is not enough evidence for establishing such finds as actual sites.

Paleo-Indian and Early Archaic Resources

During interviews with avocational collectors, it became evident that many Paleo-Indian dart points have been found in both the North and South Sulphur rivers. Dennis Carley's letter report to the Texas Historical Commission was very useful. Additional research indicated that much of this collection was acquired from a gravel company screen, after excavating from the South Sulphur River.

Informant interviews with Kenneth Bush and other collectors disclosed that a few Clovis points have been found in the vicinity of the mammoth find on the South Sulphur River near Commerce (see above), although not in demonstrable association.

Informant Interviews

Kenneth Bush

Of all the avocational collectors interviewed, Kenneth Bush of Roxton was the most helpful. His collection, estimated at 1,000 artifacts, comes exclusively from the North Sulphur River and from surface sites in the vicinity of Lamar County. His collection includes four whole Clovis points, collected from gravel bars in the North Sulphur River. Although funding for full quantification of his collection was not provided, his collection includes Dalton, San Patrice, Early Stemmed, and numerous Cary points. From surface sites he has obtained some Alba-Bonham, Maude, Steiner, and Fresno points. Mr. Bush has been very helpful and has expressed a desire to record sites in the Roxton area.

Reverend Lewis Smith

Reverend Lewis Smith of Wolfe City also has late Paleo-Indian artifacts from the North Sulphur River and the Campbell area. He has also collected Scottsbluff, Daltons, and Palmillas points, nearly all of which derive from secondary deposits. Quarry sites along Timber Creek, near

Campbell, have produced Clovis and other late Paleo-Indian and Early Archaic points.

Reverend Smith's neighbor was reported to have ca. 12-15 Trinity points (Middle Archaic) from a site eroding into Lake Tawakoni. These points are made out of local chert or quartzite material, and exhibit crude workmanship. Reverend Smith indicated the location of the site in the Hunt County Soil Survey. The soil type mapped for the site is Axtell loam, 2-5% slopes. Before the construction of Lake Tawakoni, the site would have been located 300-400 m (984-1,312 ft) east of unnamed tributary that flows into the South Fork of the Sabine River. A Contact period site from which Reverend Smith collected glass trade beads also yielded prehistoric dart and arrow points. This second site, as indicated by Reverend Smith in the Hunt County Soil Survey, is largely confined to a northward oriented finger of land. Reverend Smith's entire artifact collection includes ca. 2,700 pieces. Reverend Smith claims to know of ca. 100 sites on Lake Tawakoni.

Jerry Houser

Jerry Houser of Campbell also has collected Clovis and Dalton points, as well as Archaic and Late Prehistoric artifacts from the South Sulphur River channel and from the Bringham Cemetery near Campbell. He has numerous Dalton points from Cedar Creek (by Mabank), some of which appear to be made of Fisgah Ridge chert. San Patrice points are less common in his collection than Dalton Points.

Since Mr. Houser's Paleo-Indian materials are displayed in frames, it was not possible to conduct a thorough examination of these specimens. He has collected primarily from river gravel, but has not labeled or kept records on this material.

Anonymous

This individual requested anonymity because some of the materials in his collection are from Cooper Lake. He has collected in Oklahoma, along the Red River, Denton County, Lake Tawakoni, and the North and South Sulphur rivers. There is a considerable mixture of information in his collection and none of the

pieces are labeled. Few materials in this informant's collection could be associated with these sites. Although this individual stated that his collections were from surface survey and gravel bar collecting, two whole ceramic vessels and extensive ceramic remains from the Sanders site (41LR3), located on the Red River, suggest that digging (or perhaps trading) may also have been employed in obtaining his collection.

In 1982 or 1983, the informant found at least two human burials between the levee and the river at the Tick site (41DT6). The burials were discovered by a bulldozer cutting through the levee ca. 6-9 m (20-30 ft) from the river. He also noticed some depressions which he thought might be grave pits. His collection from this site includes human incisors, molars, and premolars. At what appears to correspond to the location of the Luna site (41DT52), the informant claims to have recovered Dallas, Carrollton, Rockwall, Edgewood, and small arrow points from surface contexts.

This individual's son has a *Bison antiquus* skull from Denton Creek, and his son's friend has another. In general, his own collections are from the North and South Sulphur rivers. He has knowledge of Paleo-Indian and Early Archaic points from around Campbell, perhaps along Timber Creek. His collections are from Lake Tawakoni and the Red River area, both in Oklahoma and in Texas. A site on his property extends onto John Shultz's property. The informant has extensive knowledge of sites in the area, and has one of the largest collections (over 1,000 items) that was shown to ARP personnel.

Jimmy Ross

Mr. Jimmy Ross, who was raised in the Peerless community, provided some of the most relevant information that could be applied to the Cooper Lake cultural resources. He visited sites in Cooper Lake with CE and ARP personnel on several occasions and could correlate some of his material to the Finley Branch gravel deposits.

On a map of the area at a location several hundred feet north of the Luna site (41DT52) and immediately east of the CE fence line, Mr. Ross pointed out a steep-walled depression measuring ca. 0.9 m (3 ft) deep and 9.1 m (30 ft) in

diameter. He claimed to have encountered this feature three or four years ago and suggested that it may have been subsidence or a pot hunter's excavation. He said that the sites along the west side of South Sulphur river have numerous flakes and tested cobbles. He also has found what he believes to be tanged knives made of local material. Mr. Ross has also collected broken celts of polished stone, from sites on the west side of the South Sulphur, downstream from the Highway 71 bridge.

In describing several of the sites he knows of to the west of Merrit Creek, Mr. Ross reported the recovery of plow-disturbed glass trade beads and shell beads from an area somewhere east of where the old road bridge crossed Merrit Creek. He said that a San Patrice point of white chert in his collection is from gravel that probably came from the Finley Quarry (41HP174). He reports that a friend of his also has recovered a San Patrice point from the same quarry. Surface collections from this site, under Delivery Order Number 6, recovered pressure flakes of this white chert, which may be from these two San Patrice points.

Vergil McFadden

Vergil McFadden of Paris has a collection of Gary and arrow points from Auds Creek, the North Sulphur River, and the vicinity of Paris. Over the last 60 years he has dug an unspecified number of Indian graves and has some large red-filmed sherds from one of these graves. He did not disclose site locations.

ARP personnel examined three large frames of points (ca. 600 items), primarily Gary points of local quartzite, with some made from Red River chert. Mr. McFadden's excavation of a Caddo burial has yielded three pots, one of which is an almost complete red-filmed bottle, decorated with incised and noded design (Maxey Noded Redware?). From Auds Creek he has a (Lightning) Whelk shell which measures ca. 15-20 cm (5.9-7.9 in) long but is not fossilized. His collection also includes several Alba-Bonham arrow points, Maud arrow points, Pedernales points (probably from central Texas), some

Pedernales-like points, another carinated bowl (probably from the same burial mentioned above), a corner tang knife, a Dalton point, a San Patrice point, and some large blades.

The archaeological value of Mr. McFadden's collection is not great, but his knowledge of site locations around Auds Creek is valuable.

Anonymous

Excavations by this individual along the South Sulphur River near the Binkley Farm recovered long bones of mammoth and bison. Other excavations east of Meylardville recovered fragmentary remains of a musk ox (*Bootherium cavafrons*), tentatively dated to the late Pleistocene.

This individual also claims to have recovered additional mammoth remains from two locations, one near the Lake Tawakoni causeway and the other 3.2 km (2 mi) west of Enloe. The latter find was comprised of a scatter of bones in a silty clay deposit 0.9-1.5 m (3-5 ft) above the gravel bar layer at the base of the Sulphur River formation. The mammoth discovery made near the Lake Tawakoni causeway was estimated by this individual to date ca. 45,000-100,000 B.P.

Anonymous

This individual claims to have walked the Sabine River and all its tributaries, as well as substantial portions of the South and North Sulphur rivers. Numerous late Paleo-Indian and Early Archaic dart points were found by this individual in his routine walks along the center of the river channels where he examines cut banks for hearths. When questioned about site locations, he would not reveal where he had found artifacts, nor did he allow complete examination of his collections. Therefore, statistical tabulation of this individual's collection was not possible.

Two other individuals, a father and son, also attended CHIP meetings. They have been active on a recorded site located 100 m (328 ft) south of State Highway 50/24 bridge over the South Sulphur River, and have also looted human graves on prehistoric sites in the Commerce area.

SUMMARY

Table 9-1 lists the information derived from the interviews with avocational archaeologists. There is a wide range of material in these collections, from Pleistocene megafauna to Contact or early Historic period trade materials. For the majority of these finds, the provenience of specific artifacts was not recorded. It appears that only two of the informants were able to provide information on archaeological sites in the Cooper Lake area proper.

The locations of the Pleistocene megafauna reported by avocational collectors are shown in Figure 9-2. None of these materials were recovered from the Cooper Reservoir area. All reported finds are located in the upper drainages of the South Sulphur, North Sulphur, and the Sabine rivers. Apparently, if deposits dating to the Pleistocene are present in Cooper Reservoir, they are deeply buried and have not been exposed in the river channel or in borrow pit excavations.

The examinations of avocational collections were of limited utility to the Cooper Lake archaeological project itself. Informants reported burials from the Tick (41DT6) and Luna (41DT52) sites, as was previously known. Anonymous collectors have continued to collect sites within

Cooper Lake in the 1980s. All of these individuals were notified that such activities are illegal, and they assured ARP personnel that they are not currently collecting. During the fieldwork for Delivery Order Number 7, however, some collectors continued to pothunt in the Lost Ridge area.

The vast majority of avocational collectors in the region go to the North Sulphur River, where the channel has been actively eroding and a vast gravel train is present. This area has revealed Pleistocene as well as Holocene cultural and paleontological materials, and to some extent draws attention away from Cooper Lake. Since most of Cooper Lake was purchased by the government in the late 1970s, thus curtailing intensive cultivation, there is not sufficient ground exposure in most of the project to draw collectors.

Avocational collectors did point out the potential of the Finley Branch for Early and Middle Archaic and transitional Paleo-Indian materials. Subsequent archaeological investigations under Delivery Order Number 6 and Delivery Order Number 7 at site 41HP159 did locate some of the earliest cultural materials yet recovered from Cooper Lake. The aid of Jimmie Ross in calling attention to the value of Finley Branch was an important contribution to this discovery.

TABLE 9-1

Summary of Archaeological and Paleontological Finds of Avocational Collectors
Interviewed Under the Terms of Delivery Order Number 7

Collector	Areas Collected	Types of Materials	Size of Collection	Buried?
Anonymous I	South and North Sulphur R, Sabine R	Paleo-Indian, Early Archaic	Unknown	Yes
Anonymous II	South Sulphur R	Graves	Unknown	Yes
Anonymous III	South Sulphur R	Graves	Unknown	Yes
Anonymous IV	South Sulphur R, Lake Tawakoni	Mammoth, antelope, bison, and musk ox	Isolates	Yes
Dallas Museum Natural History	North Sulphur R	Mammoth (articulated skeleton)	Big	Yes

TABLE 9-1 (cont.)

Collector	Areas Collected	Types of Materials	Size of Collection	Buried?
John Schultz	Mallory Creek,	Mastodon skull, dart point, scrapers	13 items	Yes
	Lamar County	Novaculite and Edwards Chert materials	13 items	Yes
	South Sulphur R	Musk ox, red deer, and mammoth remains	Isolates	No
Jimmy Ross	South Sulphur, Finley Branch, Sulphur Springs	San Patrice and other dart points	ca. 20 items	No
Anonymous V	Denton Creek, 41DT6, 41LR3, and 41DT52	Bison antiquus; graves; Middle and Late Archaic, Late Prehistoric artifacts	Isolates	No
Anonymous VI	Denton Creek	<i>Bison antiquus</i>	Isolates	No
Kenneth Bush	North and South Sulphur R, Lamar Co	Early and Late Archaic, Late Prehistoric artifacts	1,000	No
Lewis Smith	Timber Creek, Hunt Co (ca. 100 sites)	Paleo-Indian; Early, Mid, and Late Archaic artifacts	2,700	No
	Lake Tawakoni	Middle Archaic and Contact period artifacts	15	No
Jerry Houser	South Sulphur, Cedar Creek, Campbell	Paleo-Indian and Early Archaic artifacts	2,000	No
Vergil McFadden	North Sulphur R, Auds Creek	Early and Late Archaic, Late Prehistoric artifacts; graves	600	Yes
Anonymous VII	South and North Sulphur R, L. Tawakoni	Mammoth, bison	Isolates	Yes

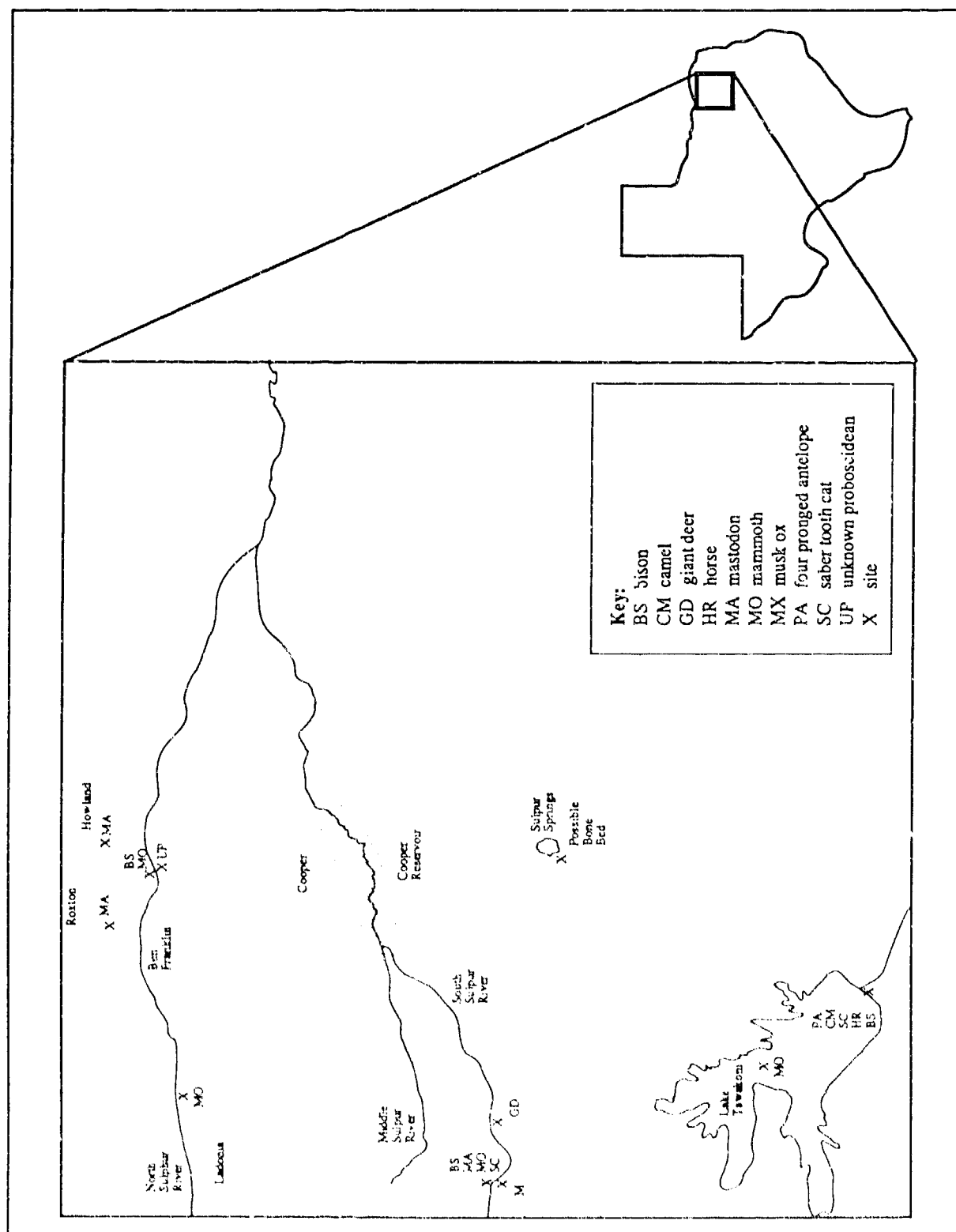


Figure 9-2. Generalized locations of Pleistocene faunal finds in the vicinity of Commerce, Texas.

Overview

10

J. M. Adovasio and D. H. Jurney

From July to December 1989, the Archaeology Research Program (ARP) of Southern Methodist University conducted an extensive archaeological survey of the Cooper Lake Delivery Order Number 7 study area. During the course of these investigations, ARP assessed a total of 153 archaeological sites in Hopkins and Delta counties, Texas. Six of these sites (i.e., 41HP87, 41HP89, 41HP107, 41DT18, 41DT148, and 41DT212) ultimately proved to be outside of the U.S. Army Corps of Engineers (CE) boundary for the project, leaving a total of 147 sites examined and reported in the following tabulations and synthesis. Of the total site inventory within the project boundary, 100 are newly registered sites and 47 were registered during previous investigations conducted between 1958 and the inception of the Delivery Order Number 7 investigations in 1989. Sixty-five sites have purely prehistoric components, 66 sites have purely historic components, and 16 sites exhibit both prehistoric and historic utilization.

The salient characteristics of the Delivery Order Number 7 sites are presented in Tables 10-1 through 10-3. It should be noted that in those tabulations and the following discussion, sites have been assigned to specific time periods based on the recovery of chronologically sensitive artifacts such as projectile points, ceramics, and other distinctive artifacts (e.g., Waco sinkers, Springware and other historic ceramics, nails, etc.), and in some

instances, radiocarbon assays. Specifically, in the case of prehistoric sites, Dawson dart points were primarily employed to define Middle Archaic components, while Gary and Kent points were used as the typical hallmarks of Late Archaic components. Untyped dart points and dart point fragments were used as indicators of undifferentiated Archaic period components, as were Waco sinkers, whose broad temporal and geographic span does not permit more precise temporal assignation (Turner and Hester 1985:258). Late Prehistoric/Late Ceramic period components were generally defined according to the presence of both untyped and typed (e.g., Bonham, Steiner, Perdiz, etc.) arrow points as well as ceramic artifact types. Because in many cases distinctive artifacts indicating specific historic components (particularly those dating ca. 1900-1945) were too diverse and/or numerous to list in Table 10-1, the reader is referred to the site artifact inventories presented by site in Chapter 8.

The principal topographic classifications employed in Tables 10-1 and 10-3 and the following discussion include floodplain, slope, and upland settings, as well as transitional zones between them. In this discussion, the channel and floodplain rise physiographic zones employed for the Delivery Order Number 7 geomorphic investigations (see Chapter 6, this volume) have been subsumed within the floodplain category.

TABLE 10-1

National Register Status of Sites Investigated in the Delivery Order Number 7 Study Area,
by Topographic Setting, Cultural Component(s), and Diagnostics (Where Present)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
Hopkins County <i>Prev. Reg. (n=22)</i>				
41HP16	slope	Undifferentiated Prehistoric; 1900-1945; Post-WW II	—	III
41HP17	floodplain	Late Archaic	Gary points	II
41HP18	slope/upland	Late Archaic	dart points	III
41HP19	floodplain	Late Archaic; Late Ceramic/ Late Prehistoric	Gary point ceramics	II
41HP20	upland	Late Archaic	Gary points	III
41HP74	slope/upland	Late Archaic; Late Ceramic/ Late Prehistoric	Gary point arrow points ceramics	II
41HP75	upland	Late Ceramic/ Late Prehistoric; 1900-1945	arrow points ceramics	III
41HP76	upland	Undifferentiated Prehistoric	point fragment (possible Gary)	III
41HP77	slope/upland	Late Archaic; Late Ceramic/ Late Prehistoric; Protohistoric; 1860-1900; 1900-1945	dart points Alba/Bonham points arrow points	III
41HP80	upland	Undifferentiated Archaic	dart points	III
41HP81	upland	Late Ceramic/ Late Prehistoric	Alba/Bonham points arrow points	III
41HP82	slope/upland	Undifferentiated Prehistoric	—	III

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41HP83	upland	Undifferentiated Prehistoric	—	III
41HP84	slope/upland	Undifferentiated Archaic; Late Ceramic/ Late Prehistoric	dart points ceramics	III
41HP85	upland	Late Archaic	dart point (possible Gary)	III
41HP86	slope/upland	Late Ceramic/ Late Prehistoric	arrow point	III
41HP88	slope	Late Ceramic/ Late Prehistoric	Alba/Bonham points arrow point	III
41HP90	upland	Undifferentiated Prehistoric; 1900-1945	—	III
41HP110	upland	1860-1900; 1900-1945; Post-WW II	—	III
41HP111	upland	Undifferentiated Prehistoric	—	III
41HP119	floodplain	Undifferentiated Prehistoric	—	III
41HP159	floodplain/slope	Middle Archaic; Late Archaic	Kent point Yarbrough point C14 date: 3626 ± 114 B.C.	I
<i>Newly Reg. (n=11)</i>				
41HP179	floodplain	Late Ceramic/ Late Prehistoric	red-filmed ceramic	III
41HP180	floodplain	Undifferentiated Archaic; Late Ceramic/ Late Prehistoric	dart point ceramics	II

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41HP181	upland	Undifferentiated Archaic; Undifferentiated Prehistoric	Waco sinker	III
41HP182	slope	Undifferentiated Prehistoric	—	III
41HP183	slope	Undifferentiated Prehistoric	—	III
41HP184	floodplain/slope	Undifferentiated Prehistoric	—	III
41HP185	floodplain/slope	Late Archaic	Gary point	III
41HP186	upland	1900-1945	—	III
41HP187	upland	1860-1900; 1900-1945	—	III
41HP188	floodplain/slope	Undifferentiated Prehistoric; 1900-1945	—	III
41HP189	upland	1860-1900; 1900-1945; Post-WW II	—	III
Delta County <i>Prev. Reg. (n=25)</i>				
41DT4	floodplain	Late Ceramic/ Late Prehistoric; Undifferentiated Prehistoric	unknown (Moorman & Jelks 1952:4)	II
41DT5	floodplain	Late Archaic; Late Ceramic/ Late Prehistoric	Gary points arrow points ceramics	II
41DT6	floodplain	Late Archaic; Late Ceramic/ Late Prehistoric	Gary points ceramics	I
41DT7	slope/upland	Late Archaic; Late Ceramic/ Late Prehistoric; 1860-1900 1900-1945	Gary points ceramic	III

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41DT11	slope	Late Archaic; Late Ceramic/ Late Prehistoric	dart points	II
41DT13	slope	Undifferentiated Archaic; Late Ceramic/ Late Prehistoric	dart points	III
41DT14	slope	Undifferentiated Prehistoric; 1900-1945	---	III
41DT19	slope	Late Archaic; 1900-1945	dart points	III
41DT21	floodplain	Late Archaic; Late Ceramic/ Late Prehistoric	Alba-like points ceramics	II
41DT26	slope	Undifferentiated Prehistoric	---	III
41DT27	floodplain/slope	Undifferentiated Prehistoric	---	III
41DT29	slope	Late Archaic	dart points	III
41DT45	floodplain/slope	Late Archaic; Late Ceramic/ Late Prehistoric	dart point ceramic	II
41DT46	slope/upland	Late Archaic	Edgewood dart point	III
41DT51	slope/upland	Late Archaic; 1900-1945	dart points	III
41DT52	slope/upland	Late Archaic; Late Ceramic/ Late Prehistoric	several dart point types several arrow point types ceramics C14 dates: A.D. 712 \pm 161 A.D. 1082 \pm 76 A.D. 1332 \pm 36 A.D. 1572 \pm 46 A.D. 1797 \pm 77	I

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41DT53	floodplain	Late Archaic; Late Ceramic/ Late Prehistoric	Gary points other dart points arrow points	III
41DT55	slope/upland	Undifferentiated Prehistoric; 1900-1945	—	III
41DT56	slope	Undifferentiated Prehistoric	—	III
41DT59	floodplain	Late Ceramic/ Late Prehistoric; 1900-1945; Post-WW II	ceramics	II
41DT60	floodplain	Undifferentiated Prehistoric	—	III
41DT61	floodplain	Late Ceramic/ Late Prehistoric	arrow point	III
41DT141	floodplain	Undifferentiated Prehistoric	—	III
41DT143	floodplain	Undifferentiated Prehistoric	—	III
41DT144	floodplain	Undifferentiated Prehistoric	—	III
<i>Newly Reg. (n=89)</i>				
41DT161	floodplain	Undifferentiated Prehistoric	—	II
41DT162	slope/upland	Undifferentiated Prehistoric; Pre-1860	Springware	II
41DT163	upland	Late Archaic	Gary point	II
41DT164	upland	Late Archaic	Gary point (possible)	III
41DT165	floodplain	Late Archaic	dart point	III

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41DT166	floodplain/slope	Undifferentiated Prehistoric	—	III
41DT167	slope	Undifferentiated Prehistoric	—	III
41DT168	slope	Undifferentiated Prehistoric	—	III
41DT169	slope	Undifferentiated Prehistoric	—	III
41DT170	slope	Undifferentiated Archaic	dart point	II
41DT171	upland	Undifferentiated Prehistoric	—	III
41DT172	slope/upland	Undifferentiated Prehistoric	—	III
41DT173	floodplain	Undifferentiated Prehistoric	—	III
41DT174	slope	Undifferentiated Prehistoric	—	II
41DT175	slope/upland	Late Archaic	Palmillas point dart point	III
41DT176	floodplain/slope	Undifferentiated Prehistoric	—	II
41DT177	slope/upland	Undifferentiated Prehistoric; 1900–1945	—	III
41DT178	slope/upland	Undifferentiated Prehistoric	—	III
41DT179	slope	Undifferentiated Prehistoric	—	III
41DT180	floodplain/slope	Undifferentiated Prehistoric; 1860–1900; 1900–1945	ironstone	II

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41DT181	floodplain/slope	Undifferentiated Prehistoric; Post-WW II	—	III
41DT182	slope	Undifferentiated Prehistoric; 1900-1945	—	III
41DT183	slope	1900-1945	—	III
41DT184	slope	1860-1900; 1900-1945	—	III
41DT185	floodplain/slope	1900-1945	—	III
41DT186	slope	1900-1945; Post-WW II	—	III
41DT187	floodplain/slope	1900-1945	—	III
41DT188	slope	1900-1945	—	III
41DT189	floodplain/slope	Post-WW II	—	III
41DT190	slope/upland	1900-1945	—	II
41DT191	slope/upland	1900-1945	—	III
41DT192	slope	1900-1945	—	II
41DT193	slope/upland	1860-1900; 1900-1945	—	III
41DT194	floodplain/slope	1900-1945; Post-WW II	—	III
41DT195	floodplain	1860-1900; 1900-1945; Post-WW II	—	III
41DT196	floodplain/slope	1860-1900; 1900-1945; Post-WW II	—	III
41DT197	slope	Post-WW II	—	III

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41DT198	upland	Late Archaic; Post-WW II	Gary point	III
41DT199	slope	1900-1945; Post-WW II	—	III
41DT200	upland	Post-WW II	—	III
41DT201	upland	1900-1945; Post-WW II	—	III
41DT202	slope/upland	Post-WW II	—	III
41DT203	slope	Post-WW II	—	III
41DT204	upland	1900-1945; Post-WW II	—	III
41DT205	slope	Post-WW II	—	III
41DT206	upland	1900-1945; Post-WW II	—	III
41DT207	slope	Post-WW II	—	III
41DT208	slope	1860-1900; 1900-1945	—	II
41DT209	slope	1900-1945	—	II
41DT210	slope/upland	1900-1945; Post-WW II	—	III
41DT211	slope/upland	1900-1945; Post-WW II	—	III
41DT213	slope	1900-1945	—	III
41DT215	slope/upland	1900-1945; Post-WW II	—	III
41DT216	upland	1860-1900; 1900-1945	—	II
41DT217	slope	1900-1945; Post-WW II	—	III

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41DT218	slope/upland	1900-1945; Post-WW II	—	III
41DT219	slope/upland	1900-1945; Post-WW II	—	III
41DT220	upland	1900-1945; Post-WW II	—	III
41DT221	slope/upland	1900-1945; Post-WW II	—	III
41DT222	slope/upland	1900-1945; Post-WW II	—	III
41DT223	upland	1900-1945; Post-WW II	—	III
41DT224	upland	Pre-1860	hand-painted earthenwares	I
41DT225	upland	1900-1945; Post-WW II	—	III
41DT226	slope/upland	1900-1945; Post-WW II	—	III
41DT227	slope	Undifferentiated Prehistoric	—	III
41DT228	slope/upland	1900-1945	—	III
41DT229	slope	1900-1945	—	III
41DT230	floodplain/slope	1900-1945	—	III
41DT231	floodplain/slope	1900-1945; Post-WW II	—	III
41DT232	upland	1900-1945; Post-WW II	—	III
41DT233	upland	1900-1945; Post-WW II	—	III
41DT234	upland	Post-WW II	—	III

TABLE 10-1 (cont.)

County Site	Topographic Setting	Cultural Component(s)	Diagnostics	NRHP Status
41DT235	upland	1900-1945; Post-WW II	—	III
41DT236	upland	Post-WW II	—	III
41DT237	slope/upland	1900-1945; Post-WW II	—	III
41DT238	slope/upland	1900-1945; Post-WW II	—	III
41DT239	upland	1900-1945; Post-WW II	—	III
41DT240	slope	1860-1900; 1900-1945	—	III
41DT241	floodplain	Undifferentiated Prehistoric	—	III
41DT242	slope/upland	Undifferentiated Prehistoric	—	III
41DT243	slope/upland	Post-WW II	—	III
41DT244	slope/upland	Post-WW II	—	III
41DT245	floodplain	Post-WW II	—	III
41DT246	slope/upland	Post-WW II	—	III
41DT247	floodplain	Late Ceramic/ Late Prehistoric	Steiner point (possible)	II
41DT248	floodplain/slope	Post-WW II	—	III
41DT249	slope	1900-1945; Post-WW II	—	III
41DT260	upland	1900-1945; Post-WW II	—	III
41DT261	upland	Undifferentiated Prehistoric	—	III

TABLE 10-2

Distribution of Components in the Cooper Lake
Delivery Order Number 7 Study Area,
by Cultural Time Period

Time Period/ Component	n	%	% Grand Total
Middle Archaic	1	1.0	0.4
Late Archaic	26	26.0	11.5
Undifferentiated Archaic	6	6.0	2.6
Late Ceramic/ Late Prehistoric	23	23.0	10.2
Protohistoric	1	1.0	0.4
Undifferentiated Prehistoric	43	43.0	19.0
Total Prehistoric	100	100.0	44.1
Pre-1860	2	1.6	0.9
1860-1900	13	10.2	5.7
1900-1945	64	50.4	28.2
Post-WW II	48	37.8	21.1
Total Historic	127	100.0	55.9

SITE DISTRIBUTION BY CULTURAL PERIOD

**Paleo-Indian (ca. 11,000 B.C.-6000 B.C.)
to Early Archaic (6000 B.C.-3000 B.C.)**

Though no Paleo-Indian or Early Archaic period sites were identified in the Delivery Order Number 7 study area or in the collections of local avocational archaeologists (see Chapter 9, this volume), such finds reported for the greater Cooper Lake region suggest sites dating to this period may be present.

The basal fragment of an apparent Dalton point was reported from a mixed context also containing ceramics, fire-cracked rock, and lithic debitage flakes within a gravel train on Finley

Branch where it forms a confluence with the South Sulphur River. However, the primary context of that late Paleo-Indian point, or for that matter any of the other recovered artifacts, is unknown.

Early Archaic period San Patrice points have been reported in avocational collections from the Delivery Order Number 6 study area, although in low numbers. Taken together, these meager data suggest that Paleo-Indian and Early Archaic populations either rarely visited and/or utilized the study area or, more likely, that sites ascribing to these groups are deeply buried in floodplain settings and hence "masked" (see below).

Middle Archaic (3000-1000 B.C.)

A Middle Archaic period component was identified with certainty at intensively studied site 41HP159, a stratified multi-component locality situated in a transitional floodplain/slope setting on Finley Branch (see Chapter 8). A second possible Middle Archaic component may be represented at site 41DT170, located on a slope within the Doctors Creek drainage on the boundary of the Delivery Order Number 7 study area. Tentative ascription to this time period is based on the recovery of a basal fragment of a possible Cossatot River point made of a nonlocal white chert. Recovered from the modern ground surface, this artifact may have been redeposited from private property northeast of the study area. However, because this fragmentary point cannot unequivocally be ascribed to the Cossatot River type and due to the uncertainty of the provenience and extent of the possible Middle Archaic component at 41DT170, the site is listed as undifferentiated Archaic in Table 10-1.

Late Archaic (1000 B.C.-A.D. 700)

Not surprisingly, Late Archaic components ($n=26$) are quite common in the Delivery Order Number 7 study area. Seven (26.9%) of these components are in "pure" floodplain or floodplain rise settings, a total that is approximately matched by the combined total of components situated in upland ($n=5$; 19.2%) or slope ($n=3$; 11.5%) settings. Eleven (42.3%) of the Late Archaic components occur in topographically "mixed" contexts, including eight in transitional

TABLE 10-3

Distribution of Sites in the Cooper Lake Delivery Order Number 7 Study Area
by Topographic setting and Gross Cultural Time Period

Topographic Setting	Prehistoric		Prehistoric/Historic		Historic		Total	
	n	%	n	%	n	%	n	%
Floodplain	20	30.8	1	6.3	2	3.0	23	15.7
Floodplain/Slope	7	10.8	3	18.7	8	12.1	18	12.2
Slope	15	23.1	4	25.0	17	25.8	36	24.5
Slope/Upland	11	16.9	6	37.5	18	27.3	35	23.8
Upland	12	18.4	2	12.5	21	31.8	35	23.8
Total	65	100.0	16	100.0	66	100.0	147	100.0

slope/upland settings and three in floodplain/slope zones.

Undifferentiated Archaic (6000 B.C.-A.D. 700)

Six prehistoric sites of general Archaic period aspect but lacking precise chronological data were identified in the Delivery Order Number 7 study area. Of these components, two each occur in slope and upland contexts, while one each occurs in floodplain and transitional slope/upland settings. Further archaeological investigations of these undifferentiated Archaic components could potentially provide more precise chronological ascription for at least some of them, notably NRHP Category II sites 41HP180 and 41DT170.

Late Ceramic/Late Prehistoric (A.D. 700-1650)

Components ascribing to this time period (n=23) are almost as common as Late Archaic loci in the Delivery Order Number 7 study area. However, unlike the arguably even distribution across the study area's landforms evinced by the Late Archaic components, Late Ceramic/Late Prehistoric loci are concentrated on floodplains (n=11; 47.8%), either on low rises or the eroded remnants of Pleistocene terraces or knolls. The

upland/slope transition zone yielded six (26.1%) components, matching the combined total site yield for the slope (n=3; 13%), upland (n=2; 8.7%), and floodplain/slope (n=1; 4.4%) zones.

An Early Ceramic period component is suggested at site 41HP77 by the recovery of dart points whose chronological associations span the Archaic through Late Ceramic/Late Prehistoric periods, and inferentially, by Pertulla's (1988:281-282) observation that Early Ceramic components are represented in greater numbers than have been previously recognized at Cooper Lake. It has also been noted by Schambach (1982:176) that many "Late Archaic" components with Gary points actually may be Early Ceramic (ca. 100 B.C.-A.D. 700) sites or Fourche Maline culture components, with the Gary varieties *Laflore* and *Camden* aiding in their chronological placement.

Analysis of dart points collected in 1970 and 1976 (Doehner, Peter, and Skinner 1978) and any others that may become available from the site would potentially aid in the isolation and definition of an Early Ceramic component at the site, should one exist. However, positive identification of an Early Ceramic component at 41HP77 is not possible in the Delivery Order Number 7 assemblage from the site, and hence, the site is indicated as containing only a Late Ceramic/Late Prehistoric period component among its other prehistoric components (see Table 10-1).

Undifferentiated Prehistoric

(Before ca. A.D. 1650)

Due to a general scarcity of chronological diagnostics, the largest number of prehistoric components identified in the Delivery Order Number 7 study area fall into the temporally undifferentiated category. While many of these loci are probably multi-component manifestations, there is presently no way to refine their chronological placement. Undifferentiated prehistoric sites occur more or less equally in floodplain ($n=9$; 20.9%) and upland ($n=7$; 16.3%) contexts as well as in the floodplain/slope ($n=7$; 16.3%) and slope/upland ($n=7$; 16.3%) transition zones. However, and perhaps significantly, the slope physiographic zone contains almost twice as many components ($n=13$; 30.9%) as the upland transitional settings, and 10% more components than the floodplain setting.

Historic

One hundred twenty-seven historic (127; 54.9% of total) components were identified within the 66 purely historic and 16 prehistoric/historic archaeological sites investigated under Delivery Order Number 7. The material cultural evidence, surface features, and data obtained from archival research and informant interviews were sufficient to categorize the majority of historic components.

Two extremely low density historic sites (i.e., 41DT162 and 41DT224; 1.6% of all historic components) dating to the pre-1860 settlement of the area were identified, although it is conceivable that some additional frontier wave sites were not detected. Also, some initial settlements or temporary historic encampments could be masked beneath or within much larger, more-intensive occupations dating to the late nineteenth and twentieth centuries.

Thirteen (10.2%) of the 127 historic components identified in the Delivery Order Number 7 study area date to the last four decades of the nineteenth century. It appears that the 1860-1900 period was characterized by continued farmstead development and the initial stages of farm tenancy. Prior to the arrival of the railroad, the principal means of subsistence for these farmsteads was animal husbandry, since the area

was too far removed from adequate markets to justify row crop agriculture or cotton production. The division of the Public Domain was most intense during this period, and by the 1870s nearly all lands had been claimed. In the 1880s and 1890s, cotton farming intensified and the labor force began to be comprised of freed African Americans who immigrated to the area from southern states.

The majority of historic components ($n=64$; 50.4%) date to the ca. 1900-1945 period. This period marked the peak and subsequent decline of cotton farming. In addition, many yeoman farmers who were successful in agriculture or land speculation left their farms and substituted tenants in order to continue their farming operations. Many urbanites and insurance companies also invested in farms in the Cooper Lake area, creating a peak demand for tenants ca. 1900-1920. This demand continued through the Great Depression, and the 1941 highway map indicates that the area was still intensively settled. Only very few of the informants interviewed as part of the Delivery Order Number 7 fieldwork (see Chapter 7, this volume) were able to adequately recall information pertaining to this period.

The post-World War II period was marked by a shift from intensive cotton farming to dairying and livestock husbandry. This period represents the second most common class of historic component ($n=48$; 37.8%), and it is the time for which informants could provide the most data pertaining to site location and historical events. With this period's shift away from intensive cotton farming, labor was concentrated in central areas, and old farms were reused as ranching facilities (i.e., stabling, corrals, feeding, and watering).

Assuming that the overwhelming majority of twentieth century components represent farmsteads and ranching facilities (in absence of firm evidence to the contrary), and excluding sites 41DT180, 41DT246, and 41DT246 (which clearly are not farmsteads or ranching facilities), it appears that a total of 104 components of this kind exist within the Delivery Order Number 7 study area. Of these, 34 (31.2%) and 32 (29.4%) are situated in upland and upland/slope settings, respectively. Twenty-six (23.8%) components are situated on slopes, while floodplain ($n=4$; 3.7%) and floodplain/slope ($n=13$; 11.9%) settings account

for a combined total of 17 (15.6%) of the components from this class. This pattern parallels a firm, prior preference for upland ($n=5$; 38.4%), slope/upland ($n=4$; 30.8%), and slope ($n=3$; 15.4%) settings exhibited by pre-twentieth century farmstead/ranch components ($n=12$) among the Delivery Order Number 7 sites.

CHRONOLOGY OF AREAL USE

As in the Delivery Order Number 6 study area (Jurney and Bohlin 1993) and as noted above, the 147 sites investigated in the Delivery Order Number 7 study area reflect utilization and/or occupation of the Cooper Lake vicinity for a relatively lengthy period of time. Though Paleo-Indian and Early Archaic artifacts are lacking from the immediate study area, their presence nearby—albeit in small numbers—does demonstrate at least minimal utilization and/or occupation of the greater Cooper Lake vicinity from at least early Holocene times. From the Middle Archaic through recent Historic periods, the Delivery Order Number 7 study area evidences more or less continuous, if occasionally light to ephemeral occupation or use.

Prior to discussion of the intensity of areal utilization as reflected in the Delivery Order Number 7 site sample, certain points regarding the apparent distribution of sites should be reiterated or stressed. First, the "absence" of late Paleo-Indian (or for that matter, earlier groups) and Early Archaic components is probably more illusory than real. The geological structure of the study area practically ensures that at least some earlier occupations are deeply buried, a postulation that is strongly supported—albeit circumstantially—by similar observations regarding the Finley gravel train in the Delivery Order Number 6 study area (Jurney and Bohlin 1993:6-18 to 6-20, 9-2; see Chapter 6, this volume).

Second, given the size of the Delivery Order Number 7 study area and the relative intensity of examination that it received, it is *assumed* that the distributions noted above (see Tables 10-1 to 10-3) for sites dating after the Middle Archaic period are fairly accurate reflections both of variability in topographic placement and total numbers of sites/components by cultural period.

INTENSITY OF AREAL UTILIZATION

If, as stated above, it is assumed that the recorded distribution of sites and components is statistically representative of the actual utilization of the Delivery Order Number 7 study area (at least after Early Archaic times), then there is clear evidence of a gradual increase of areal exploitation from the "beginning" of the aboriginal occupation sequence to the "end" ca. A.D. 1650. This condition is paralleled, notably, in the Delivery Order Number 6 study area (Jurney and Bohlin 1993) and in other investigated portions of Cooper Lake as well (Moir, McGregor, and Jurney 1993). Indeed, many of the trends noted in the Delivery Order Number 7 study area, such as the relative abundance of Late Archaic and Late Prehistoric sites, provide further corroboration of conditions which now may be taken to represent aboriginal "truisms" for the greater Cooper Lake area.

Within the general pattern of increasing areal exploitation there may be some probable short-term, retrograde fluctuations reflecting changing local ecology with attendant land-use modifications. However, the scarcity of good chronological controls on most of the prehistoric sites precludes any macro-delineation of changing land-use parameters.

SUBSISTENCE AND SEASONALITY

Once again, as in the Delivery Order Number 6 study area, very little data directly relating to aboriginal subsistence strategies or seasonality of site use were recovered during the Delivery Order Number 7 investigations. Flotation samples from four sites (i.e., 41HP159, 41HP162, 41DT161, and 41DT175) examined during the Delivery Order Number 7 fieldwork, combined with those obtained from earlier archaeological investigations at an additional six archaeological sites (i.e., 41HP77, 41HP102, 41HP103, 41HP168, 41DT16, 41DT52, and 41DT84) that were examined under that same delivery order, permit only very general comments on subsistence and seasonality in the greater Cooper Lake study area (see Appendix D, this volume).

As Cathy J. Crane notes in Appendix D (this volume), the archaeobotanical samples analyzed

under Delivery Order Number 7 indicate that, despite some presumably minor regional differences, the Cooper Lake aboriginal populations practiced subsistence strategies similar to other Blackland Prairie populations. The Cooper Lake archaeobotanical assemblage suggests reliance on hickory, acorn, and pecan nuts; *Psoralea* sp. (tubers); and *Cucurbita* sp. (squash). The small number of samples collected from the Delivery Order Number 7 sites (i.e., 41HP159, 41HP162, 41HP168, 41DT52, and 41DT161) and the very small amounts of carbonized plant remains recovered from them, however, do not permit extended commentary.

GENERAL CHARACTER OF SITE UTILIZATION

The scale and resolution of the 1989 investigations in the Delivery Order Number 7 study area did not allow the acquisition of sufficient information to delimit the patterns of individual prehistoric site use—or more generally, intersite modes of exploitation—within the greater Cooper Lake study area. However, detailed examination of the lithic assemblages from selected sites examined by ARP personnel in 1991 and 1992 (see Chapters 5 and 8, this volume) does provide some information on site utilization at six localities.

The six flaked stone assemblages examined in 1991 and 1992 were recovered from sites 41HP76, 41HP159, 41DT21, 41DT177, 41DT182, and 41DT247. As Table 10-1 indicates, site 41HP159 is a multi-component (i.e., Middle and Late Archaic) locality, site 41HP76 has a *possible* Late Archaic component, site 41DT21 is a multi-component (i.e., Late Archaic and Late Prehistoric) site, and 41DT247 may preserve a Late Prehistoric component. Sites 41DT177 and 41DT182 are considered undifferentiated prehistoric localities.

Fine-grained Ogallala quartzite (or silty-chert) predominates over the coarser-grained varieties noted in all assemblages (see Chapter 8, site 41HP159 for the discussion of lithic raw material). Biface reduction predominates the six flaked stone samples. All manufacture stages (i.e., primary, secondary, and tertiary) are represented in each of the assemblages; however, primary

reduction debitage is the most prevalent. Generally speaking, the six sites appear to have served as retooling stations where unmodified material was reduced to a transportable size and taken elsewhere for refinement. The majority of refined tools recovered from the sites are broken or reworked. These were probably brought to the site and discarded after new material was procured. Three sites (i.e., 41DT177, 41DT182, and 41DT247) exhibit low percentages (<5%) of utilized specimens, which suggests that they were visited for only short periods of time and supports the hypothesis that the major focus of activities was raw material procurement or initial processing close to a raw material source.

The samples from sites 41HP76, 41HP159, and 41DT21 exhibit a higher percentage (i.e., 8-10%) of utilized specimens. Two of these, 41DT21 and 41HP76, also show fairly high proportions (i.e., $\geq 25\%$) of tertiary reduction debitage, which suggests they may have seen slightly longer occupation and less-intensive material procurement activities. Site 41HP159 has a very low percentage of tertiary debitage (13.9%), suggesting non-sedentary site use, but the locus also exhibits one of the highest percentages of utilized specimens (10%), suggesting a more sedentary occupation/utilization. This conflicting data may be due to the mixing of the two components known to exist at the site.

Unfortunately, in absence of similar data from other sites in the Delivery Order Number 7 study area, little else can be added to our awareness of site utilization patterns in this portion of Cooper Lake.

SYNTHESIS AND CRITICAL RETROSPECTIVE

The original research design for the Delivery Order Number 7 archaeological survey and testing program (Moir and Jurney 1988) had the same foci for both prehistoric and historic resources. Specifically, the work was to address (1) prehistoric and historic culture chronology, (2) prehistoric and historic settlement patterns and environment, (3) prehistoric and historic subsistence and technology, and (4) sociocultural reconstruction.

Even a cursory examination of this document

or the various other SMU Cooper Lake volumes, with the possible exception of the report on investigations conducted at 41DT105 (Winchell, Rose, and Moir 1992) under the terms of Delivery Order Number 5, indicates that while substantial data were collected on some of the research themes articulated above, many questions still remain unresolved.

Specifically, though certain time periods seem to be well represented in the study area (notably, the Late Archaic and portions of the Late Prehistoric periods), other periods or segments of them remain virtually unknown. The general scarcity of sites dating to before the Late Archaic period has already been mentioned above and is clearly unresolved. While we favor the position that earlier sites are probably deeply buried, little actual proof is available to confirm this assertion. In the absence of convincing evidence to support or refute this position, it is pointless to speculate on why earlier populations *may* have avoided the study area.

Similarly, the apparent lack of Early Ceramic components or occupations attributable to the latter portion of the Caddoan period may be an artifact of sampling and/or identification, or they may be real. In either case, the Delivery Order Number 7 research is moot on these points.

The imperfect character of the culture sequence is unfortunately thoroughly eclipsed by the continued scarcity of extensive, high-resolution data on subsistence, seasonality, and the general character of site utilization of most prehistoric loci identified, not only in the Delivery Order Number 7 study area, but elsewhere in Cooper Lake as well. While ongoing work at Cooper Lake may shed light on some of these issues, many remain dimly illuminated.

In contrast to the relative inconclusiveness of the prehistoric research, the Delivery Order Number 7 historic research has provided substantive new data relating to historic utilization of the study area and, more importantly, has added some fine brush strokes to the emerging picture of Euro-American utilization of the study area through time.

The historical cultural chronology for the project area reflects the pattern of settlement. Census records indicate that relatively few families were residents of the Cooper Lake project area in

the 1830s and 1840s, but that the first true surge of settlement began in the 1850s. Of course, many of these early settlers had settled at various locations during the westward migrations (see Chapter 7, this volume), and husbands and wives of these households were frequently themselves from different states of origin. Following the Civil War, patterns of immigration and *in situ* population growth were blended, and a new agrarian pattern emerged that was based largely on landowning status.

Sites dating solely to the initial wave of settlement are present in Cooper Lake and, in some cases, have been spatially isolatable. Apparently, the farmstead life-cycle within Cooper Lake followed a three-stage sequence that was frequently interrupted. The initial settler began a temporary farmstead which was used for less than a decade, with modest increases in household size. This was followed by (1) enlargement and remodeling of the initial household, or (2) movement to adjoining community centers or town centers. The final stage was marked by estate division among heirs and frequent reoccupation by tenant households. Presently, sites dating to both the frontier settlement and post-frontier agrarian expansion, household growth, and differentiation have received intensive investigations. However, more extensive and intensive studies may be necessary on frontier sites to more adequately address the environmental aspects of farmstead success and to more fully understand the frontier pattern of settlement and site selection.

The ethnic integration of frontier social groups is characterized by a dichotomy, in that some settlers moved in related or affiliated groups from their homes to selected areas, while others followed varied migration routes and achieved a true "melting pot" of regional cultural influences. An examination of census records for 16 prominent families who have been identified within and adjacent to Cooper Lake indicates that husbands and wives were natives of at least 12 states prior to their immigration to Texas (see Chapter 7, this volume). Marriages frequently spanned what have been defined as the Upper Southern States (i.e., Missouri, Tennessee, and Kentucky) and Lower Southern States (i.e., South Carolina, Georgia, Alabama, and Mississippi). Also, as is perhaps suggested by the

bioanthropological studies of interments from historic cemetery 41DT105 (Winchell, Rose, and Moir 1992), individuals of Native American descent may have been incorporated into this sample of the Cooper lake frontier population. As noted by informants, freedmen who immigrated into the Friendship Community also included individuals of Native American descent.

Finally, it appears that the historic data from the Delivery Order Number 7 investigations have supported the notion that technology plays an overriding role in the subsistence strategies employed in agricultural activities and in the success of farms and the life-cycles of developing families. The development of the steel plow (ca. 1870), combined with the advent of the railroad, precipitated a shift toward cotton cultivation and a cash-crop economy. Local forests supplied oak lumber for log houses, but it was not until well-developed overland routes and the railroad were established that pine lumber became available for low-cost housing. During the cotton explosion (ca. 1890-1930), with its commensurate increase in rural areas, pine lumber was universally available for low-cost tenant housing. In the Cooper Lake area, farmsteads with horizontal log technology are rare, while box and strip tenant houses built with pine lumber are very common. Informants report that the study area's box and strip houses were made from local pine lumber (Parish and Perttula 1988; Bailey, Boyd, and Bousman 1991:10); however, pine is not native to Cooper Lake.

Brick kilns are another type of part-time industry that received local prominence, at least prior to the railroad. Farmers or local entrepreneurs could manufacture bricks to meet local demands, but once cheap sources of commercial brick were available, there was no market for local, low-fired brick. However, brick recycling is a common phenomenon in Cooper Lake farmsteads.

Other types of subsistence or light industrial activities include sorghum presses or mills. These portable machines were both animal- and steam-powered, and are reported to have been used on several African American farmsteads. Despite the presence of light industrial sites and relatively extensive archival and informant research in these locations, archaeological evidence in the form of features and interpretable material culture assemblages has been minimal from those sites investigated to date (e.g., 41HP105, 41DT180, and 41DT154).

NATIONAL REGISTER ELIGIBILITY AND RECOMMENDATIONS

Of the 147 archaeological properties evaluated within the Delivery Order Number 7 project boundaries, only four are clearly eligible (Category I) for the National Register of Historic Places (Table 10-4, see Table 10-1). The Category I sites include 41HP159, 41DT6, 41DT52, and 41DT224, all of which could yield important data on local prehistory (i.e., sites 41HP159, 41DT6, and 41DT52) or history (i.e., site 41DT224).

Twenty-three other properties classified as Category II require further information to determine their National Register eligibility. The Category II sites include 15 prehistoric sites (i.e., 41HP17, 41HP19, 41HP74, 41HP180, 41DT4, 41DT5, 41DT11, 41DT21, 41DT45, 41DT161, 41DT163, 41DT170, 41DT174, 41DT176, and 41DT247); three prehistoric/historic sites (i.e., 41DT59, 41DT162, 41DT180); and five historic sites (i.e., 41DT190, 41DT192, 41DT208, 41DT209, and 41DT216).

The remaining 120 properties (47 prehistoric, 13 prehistoric/historic, and 60 historic) are clearly not eligible (Category III) for inclusion on the National Register of Historic Places.

TABLE 10-4

Summary of NRHP Status Assigned to Sites in the Delivery Order Number 7 Study Area,
by NHRP Category and Gross Cultural Time Period

NRHP Category	Prehistoric		Prehistoric/Historic		Historic		Total	
	n	%	n	%	n	%	n	%
Category I	3	4.6	—	—	1	1.5	4	2.7
Category II	15	23.1	3	18.75	5	7.6	23	15.7
Category III	47	72.3	13	81.25	60	90.9	120	81.6
Total	65	100.0	16	100.0	66	100.0	147	100.0

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Reanalysis of Existing Cooper Lake Materials from Southern Methodist University

Sue E. Linder-Linsley

Appendix

A

As specified by Delivery Order Number 7, this reanalysis is an initial inspection and inventory necessary to upgrade all previous archaeological collections from Cooper Lake and associated records for long-term curation under Southern Methodist University's jurisdiction. The following Federal Laws are relevant to collections management: the Reservoir Salvage Act of 1960, as amended (P.L. 86-523; 74 Stat. 220, 88 Stat. 174; 16 U.S.C. 469 et seq.); the National Historic Preservation Act of 1966, as amended (P.L. 89-665; 80 Stat. 915; 16 U.S.C. 470 et seq.); the National Environmental Policy Act of 1969 (P.L. 91-190; 83 Stat 852; 42 U.S.C. 4321 et seq.); the Archaeological Resources Protection Act of 1979, as amended (P.L. 100-588; 102 Stat. 2983; 16 U.S.C. 470aa-470mm); the Abandoned Shipwreck Act of 1987 (P.L. 100-298; 102 Stat. 432; 43 U.S.C. 2101 et seq.); 36 CFR Part 79 "Curation of Federally-Owned and Administered Archaeological Collections;" ER 1130-2-433; ER200-2-2; ER1105-2-100; ER 1130-2-438; ER1165-2-131.

These laws establish the requirement that significant archaeological artifacts and associated records acquired pursuant to Federal recovery mandates must be appropriately curated by deposit in a collections management center possessing adequate long-term curatorial facilities. These laws mandate this responsibility to Federal agencies to

provide for the use of archaeological collections in a controlled manner for education, scientific study, and enrichment of public knowledge.

Materials collected during earlier studies (prior to 1987) by SMU at Cooper Lake have received various levels of analysis and curation. Some materials have never been analyzed and clearly benefitted from updated research. This analysis focused on the comparative information among important sites to enhance site evaluations and improve the evaluation of potential to address the prehistoric research themes outlined in the Research Design. This analysis also clarified the collection's curation status for applied research on sites receiving ongoing cultural resource evaluation as well as providing a baseline for applied research opportunities in the future. This analysis included artifacts collected under the contracts with SMU listed in Table A-1, which were funded by the U.S. Army Corps of Engineers (CE).

OVERVIEW OF REANALYSIS

Methods Stage 1

Protocols

The methods used for analysis were the same as those used by ARP/SMU for Cooper Lake materials recovered under CE contact

TABLE A-1

Contract Data for Artifact Collections Reanalyzed under Delivery Order Number 7

Year	Agency	Contract No.	Reports
1970-71	National Park Service	7931-L00140	Hyatt and Skinner (1971); Skinner and Hyatt (1971); Hyatt (1972)
1972-74	National Park Service	CX7000-3-0104	Hyatt, Butler, and (1974); Hyatt and Doehner (1975)
1974-75	National Park Service	CX7000-4-0148	Doehner and Larson (1975)
1976-77	National Park Service	CX5880-6-0020	Bagot (1976)
1976-78	Corps of Engineers	DACW-29-76-C-0316	Doehner and Larson (1978); Doehner, and Skinner (1978)

DACW63-87-0017 since 1986. The artifacts and types of analysis selected for this "reanalysis" were determined in consultation with key archaeologists and CE personnel. The reanalysis focused on gathering new information which was directly compared to and used for data synthesis of current site descriptions and interpretations. Over 100 ft³ (2.8 m³) of existing materials were examined, analyzed, and all C-14 samples were sorted for examination of their archaeological context and condition. Reanalysis began by selecting 70 boxes (ca. 105 ft³) of pre-1980 Cooper materials that were currently in storage at SMU/ARP. These boxes represented entire collections from the randomly selected sites. That is, all boxes containing artifacts for an individual site were selected; no partial site collections were evaluated. All ceramics, projectile points, and bifaces from this subset of 70 boxes were pulled, along with all historic materials.

When artifacts were "pulled," a note was put in the artifact's place indicating that all ceramics, projectile points, bifaces, and biface fragments had been re-boxed by artifact type. For each pulled artifact a duplicate 3 in x 5 in label card was made, along with a small piece of paper containing all label information. The small label and artifact were placed in plastic zip loc bags. The bag was

then stapled through one of the top flaps to the card so that the bag could still be opened.

These materials were then evaluated against the information gathered for interpretation in previously published site descriptions and the investigations currently being carried out for Cooper (1987-1990). Old published site reports were copied and placed in manila file folders by site. These reports included: Moorman and Jelks (1952); Duffield (1959); Johnson (1962); Gilmore and Hoffrichter (1964); Hyatt and Skinner (1971); Skinner and Hyatt (1971); Hyatt (1972); Hyatt, Butler, and Mosca (1974); Hyatt and Doehner (1975); Doehner and Larson (1975); Bagot (1976); Doehner and Larson (1978); and Doehner, Peter, and Skinner (1978).

Information from multiple years of work on the same site are now easily comparable and sites with small amounts of published information are readily identifiable. Site reports were evaluated as to whether the artifact assemblages had been analyzed in a manner that was compatible with previous analyses at the same locality. Reanalysis was then conducted to provide comparability between data sets and/or sample data not previously gathered. A detailed discussion of this analysis is presented in the results sections of this chapter.

In addition, as each box of material was examined, observations were made as to the curation status. Labels were checked for accuracy and completeness, contents checked against box labels, and quality of packing and the compactness of packaging were recorded. This was only a review of the curation status and a minimum of curatorial upgrading was done.

A complete inventory list of all artifacts which are CE property currently residing at SMU was compiled. This list is the complete curation inventory required for Delivery Order Number 7 (on file, available upon request). An earlier version and subset of this inventory list is the list of materials used for the reanalysis of old Cooper artifacts. This earlier listing (on file, available upon request) contains only those artifacts which were used to gather additional information and are listed by box number as they were at the time of reanalysis.

As each box was recorded on this inventory list, it was assigned a unique box number. These box numbers are recorded on the inventory list and allow easy identification of a specific box. The previous system, which did not number the boxes from each site, had no means by which a box containing specific items could be distinguished.

The burials were evaluated to determine if data retrieval can benefit from new techniques of analysis for human remains. While the new burials from the historic cemetery 41DT105 (Delivery Order Number 5) have been turned over to the CE for reburial, the old Cooper burials (including Delivery Order Number 4) are currently housed at SMU. A few samples from 41DT105 were retained for current and future forensic studies. These samples are on file with the Department of Anthropology, Bioanthropology Laboratory of the University of Arkansas, under the direction of Jerome C. Rose. They remain CE property. The Sinclair Cemetery samples include: three teeth, one bone sample, and one soil sample from each burial (see Winchell, Rose, and Moir 1992). Each inhumation which received a discrete burial number was placed in an individual box. The "reanalysis" found the 1.48 ft³ boxes only ¼ full of loose bones. Some of the burials (<50%) were labeled.

All of the ceramics were boxed and listed on the inventory list as diagnostics. There are a total of 12 boxes of diagnostic ceramics currently housed at SMU (Box Numbers 1014, 1019, 1036, 1038, 1107, 1108, 1110, 1113, 1114, 1115, 1398, and 1401). The ceramics pulled for analysis and evaluation were given to Frank Winchell for review. The results of his analysis and evaluation of the research potential of these collections is presented in Appendix B within this report.

Plant remains were also evaluated. Well-preserved samples were submitted for identification and an evaluation of their contribution to the interpretation of sites and paleoenvironments. Also, the carbon samples were evaluated as to their condition, size, and quality of context from which they were collected. Dateable samples (minimum of six) that are from good contexts and of possible utility in site interpretation will be submitted for C-14 dating upon final determination of the most appropriate research needs or data gaps.

Observations

The first 70 boxes consisted of items from sites 41DT1, 41DT16, 41DT80, and 41DT6 (X41DT1, X41DT33, X41DT68, and X41DT37 respectively). Ceramics, projectile points, bifaces, biface fragments, and historic artifacts were pulled to be analyzed and re-boxed by artifact type. A list of these materials is on file at ARP and CE and can be made available on request.

It was found that 90% of the boxes mostly contained unlabeled artifacts, with only the lithic tools individually labeled. Many of the cards only contained county and site number, but not the complete trinomial. It was also found that the boxes were only 34% full on average, ranging from 12.5% to 98%. The condensed pack volume of artifacts for these 70 boxes would be 18 ft³.

At this stage in the "reanalysis" it was apparent that the high occurrence of a lack of complete site trinomials (or the X41 system, if the X was present at all) on the label could be potentially confusing to future researchers because the second and third components of both the temporary SMU and TARK trinomials are

similar. It was then decided to proceed with Stage 2 instead of continuing to pull artifacts.

Methods Stage 2

Based on the observations from the first 70 boxes, a decision was made to arrange and assign the site numbers for each box. All boxes of old Cooper artifacts were gathered together. Old site descriptions, field notes, published reports, and any complete trinomial on a box were used to determine if artifacts labeled DT# were SMU temporary designations X41DT# or were a TARL designation 41DT#. This task was relatively easy to do based on the year of excavation site description but was tedious and time consuming. Artifacts from multi-site boxes were placed in single site boxes. Each single site box was then labeled with its temporary and TARL trinomials.

Researchers can now go to a box looking for either a TARL or preliminary (X) number and be sure they have the correct box of artifacts. In addition, the report files, ordered by site in manila folders, will allow future researchers to review the published information on a particular site. These files are located in Box Number 1541. As new reports are written for the Cooper Lake project area, they will be included.

State of Texas Site Forms were generated as part of Delivery Order Numbers 4, 5, 6, and 7 for all sites in the project area. These original site forms are filed loose in manila folders and are part of the curation documents. Also, a copy of each form was spiral bound into nine volumes. Two sets of these spiral bound copies were produced: one will be ARP's working copy, and the other will be filed with the curated documents (Box 1327). The spiral binding will prevent pages from being misplaced but the loose originals are available if needed.

The field notes and site forms, etc., were organized into binders with their spines clearly labeled, and a table of contents was placed in the front of each binder. All of these binders were then placed in document storage boxes with the box's contents clearly labeled on the outside.

All of the old Cooper burials were re-packed in order to prevent the bones from receiving additional fractures as a result of poor packing. The individual bones were wrapped in paper to

absorb shocks from impacts between bones while in the box. Many of the bones should be coated in PVA to protect them from further deterioration, and all bones should be repackaged using polyethylene bags and foam padding (Sease 1987:56:63). There is no significant amount of new information that could be gained by additional analysis of these burials at this time without a considerable expenditure of funds. The results of previous studies have been summarized in Burnett's (1990) overview of the South Sulphur River Basin. However, many of the bones are well preserved and could be used for stable isotope or radiocarbon dating, if future researchers need additional collaborative data for reconstructing paleo-lifeways.

The pulling of artifacts for reanalysis continued after the above tasks were completed. The additional pulled material included the sites listed in Table A-2.

These additional 80 sites represent 200 boxes (152 ft³). These sites were pulled based on an apparent lack of analysis or due to specific request by key archaeologists to use additional information from previously analyzed sites to enhance their current comparative information.

Radiocarbon Reanalysis

The reanalysis of old SMU Cooper Lake collections has yielded several additional C-14 samples which have suitable amounts of charcoal and could fill data gaps in the prehistoric chronology. These old collections include 166 C-14 samples which have not been assayed. These are from eight sites: 41DT1 (n=29 samples), 41DT6 (n=19), 41DT16 (n=11), 41DT42 (n=1), 41DT44 (n=7), 41DT52 (n=12), 41DT80 (n=19), and 41HP102 (n=68). All sites except for 41DT1 and 41DT44 have radiocarbon determinations: 41DT6 (n=2 dated), 41DT16 (n=2), 41DT42 (n=1), 41DT52 (n=5), 41DT80 (n=7), and 41HP102 (n=17). A complete listing of all previously run dates can be found in Haas (1993).

The curated C-14 samples were ranked according to five categories: 1) a large sample of 75 grams, well packaged, 2) a sample < 5 grams, well-packaged and suitable for accelerator, 3) mixed, generally small, inadequate packing,

TABLE A-2

Stage 2 Sites in Addition to 41DT1, 41DT6, 41DT16, 41DT80 Included
in the Delivery Order Number 7 Reanalysis

Temp Site Number	TARL Site Number	Temp Site Number	TARL Site Number
X41DT3	41DT19	X41DT57	41DT71
X41DT4	41DT27	X41DT58	41DT72
X41DT6	41DT14	X41DT59	41DT73
X41DT7	41DT18	X41DT60	41DT74
X41DT8	41DT28	X41DT62	41DT76
X41DT9	41DT20	X41DT63	41DT77
X41DT11	41DT29	X41DT64	41DT78
X41DT13	41DT31	X41DT66	41DT21
X41DT14	41DT32	X41DT67	41DT79
X41DT16	41DT34	X41DT72	41DT84
X41DT18	41DT36	X41DT68	41DT80
X41DT21	41DT39	X41HP1	41HP20
X41DT22	41DT40	X41HP3	41HP75
X41DT24	41DT17	X41HP4	41HP76
X41DT26	41DT43	X41HP6	41HP21
X41DT28	41DT45	X41HP9	41HP25
X41DT29	41DT46	X41HP10	41HP79
X41DT30	41DT47	X41HP11	41HP80
X41DT31	41DT48	X41HP12	41HP81
X41DT32	41DT49	X41HP13	41HP82
X41DT34	41DT50	X41HP14	41HP83
X41DT35	41DT51	X41HP15	41HP84
X41DT36	41DT52	X41HP16	41HP85
X41DT38	41DT7	X41HP17	41HP86
X41DT39	41DT53	X41HP18	41HP87
X41DT42	41DT56	X41HP20	41HP88
X41DT43	41DT57	X41HP21	41HP89
X41DT44	41DT12	X41HP22	41HP90
X41DT45	41DT59	X41HP23	41HP91
X41DT46	41DT60	X41HP24	41HP92
X41DT47	41DT61	X41HP25	41HP93
X41DT48	41DT62	X41HP26	41HP94
X41DT49	41DT63	X41HP27	41HP95
X41DT50	41DT64	X41HP28	41HP96
X41DT51	41DT65	X41HP29	41HP97
X41DT52	41DT66	X41HP31	41HP99
X41DT53	41DT67	X41HP32	41HP100
X41DT54	41DT68	X41HP33	41HP101
X41DT55	41DT69	X41HP35	41HP103
X41DT56	41DT70		

potentially contaminated, 4) poorly packed, contaminated, 5) no visible charcoal. A detailed listing of unused old Cooper samples is on file with ARP and CE and is available upon request. Table A-3 summarizes the samples available for future radiocarbon dating by category.

Since 41HP102 has the best-dated contexts, no farther dates are recommended. Also, no further dates are recommended for site 41DT42, 41DT52, and 41DT80 because these also have dates from secure archaeological contexts.

Site 41DT44 has no previous dates, and although two good samples are present, there is a possibility that this may be a modern fence post. It is recommended that at least one of the Category 3 samples from Square 483B of site 41DT1 could provide useful information since there are no previous dates from this site. At least one sample from 41DT6 could aid in chronological placement of this site. The samples from the best context are from Feature 2 at 41DT6, but these samples are designated as Category 3. Category 1 samples from Feature 21A and TP12 at site 41DT52 could fill chronological data gaps for this locality.

These dates could aid in expanding the matrix of well-dated features and/or deposits from additional sites that still require evaluation of their National Register eligibility. The most useful samples have the most charcoal and firmest association to cultural features or strata currently available.

The recommendations for additional radiocarbon assays are awaiting the completion of site evaluations. Running a minimum of six additional dates was a requirement of Delivery Order Number 7 under contract DACW63-87-0017 and those samples which merit dating and relate to the Research Design are currently being selected.

CONCLUSIONS AND RECOMMENDATIONS

Overall, the old Cooper collections exhibited a lack of organization. The "reanalysis" has resulted in consolidating the old Cooper collection and organizing and identifying materials into a user-friendly status for future researchers. All Cooper artifact boxes have been identified and labeled, boxes with multiple sites have been divided, and all diagnostics have been re-boxed by type. A total of 257 ft³ (105 ft³, stage 1 + 152 ft³, stage 2) of old Cooper collections were reviewed during this reanalysis. Excluding documents, there are 476 ft³ of old Cooper artifacts inventoried. By using the inventory list a researcher can make maximum use of the collection by identifying: (1) how many boxes a particular site has; (2) which individual boxes, by number, need to be evaluated; and (3) if there are other boxes of interest. The curation of field notes, site forms, reports, and other archival documents into

TABLE A-3

Curated Radiocarbon Samples from the Cooper Lake Project, by Category and Site

Site	Category 1	Category 2	Category 3	Category 4	Category 5
41DT1	—	—	—	5	—
41DT6	1	1	15*	—	1
41DT16	3*	2	3*	3	—
41DT42	—	—	1*	—	—
41DT44	3*	—	4*	—	—
41DT52	5*	5*	1	1	—
41DT80	1*	—	9*	9*	—
41HP102	13*	40*	9*	3*	3*

* One or more samples from features.

organized labeled document storage boxes with box numbers has maximized the study potential of these documents.

In addition to the approximately 650 ft³ of Cooper Lake materials now residing at Southern Methodist University, there are also Cooper Lake collections at the University of North Texas from their 1986 work under contract DACW63-85-D-0066 with the Corps of Engineers. Prewitt & Associates has collections from their 1986-87 work under contract DACW63-86-D-0010, which are temporarily housed in building S14 at the Federal Center in Fort Worth (four boxes of artifacts and soil samples). Prewitt & Associates also have current work (i.e., 1990 and later) under contract DACW63-90-D-0008 with the Corps of Engineers. The materials from the 1950s River Basin Survey (Moorman and Jelks 1952) and the materials from the Dallas Archaeological Society's 1960s excavations at the L. O. Ray site, 41DT21 (Gilmore and Hoffrichter 1964), are currently housed at TARL.

The reanalysis has brought the curation status of Old Cooper artifacts up to a user-friendly level and current research will clearly benefit from the additional information. But in order to bring the collection up to modern curatorial standards, the artifacts could clearly benefit from additional work. We recommend that artifacts be labeled, particularly the diagnostics. The individual cards inside the boxes need to have the complete site trinomials added to them. Also, storage space could be conserved if the artifacts were bagged into plastic zip-loc bags and packed for condensed storage. These additional improvements, along with a computerized inventory system, will significantly upgrade the collections for long-term curation and will provide for the use of the collection in the SMU Collections Management facility. All new Cooper artifacts were fully labeled with diagnostics boxed by type and all other materials dense packed.

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Ceramic Reanalysis

Frank Winchell

Appendix

B

INTRODUCTION

Three sites, Manton Miller (X41DT1 or 41DT1), Tick (X41DT37 or 41DT6), and the Spike site (X41DT33 or 41DT16), were chosen for Stage 1 ceramic reanalysis. Reanalysis of a ceramic sample from a fourth locality, the Lawson site (41HP78), was conducted under Delivery Order Number 4 and is reported in Moir, McGregor, and Jurney (1993). Based on a review of the Cooper Lake professional reports produced between 1952 and 1978 (i.e., Moorman and Jelks 1952; Duffield 1959; Hyatt, Butler, and Moser 1974; Hyatt and Doehner 1975; Doehner and Larson 1978; and Doehner, Peter, and Skinner 1978), these particular sites were chosen because they provided relatively large samples representative of the total of 23 ceramic-bearing sites investigated in the Cooper Lake project area.

These three sites also had some interesting aspects which made them desirable for study. For example, the Manton Miller site (investigated in 1973) was one of the two type sites used for the definition of Johnson's LaHarpe Aspect. The Tick site was claimed to have contained a single component Early Ceramic occupation, and the Spike site (investigated in 1976) had a deep midden deposit containing ceramics which may have been associated with a possible transition from the Early Ceramic to Early Caddo periods.

The purpose of this study is to sample and evaluate the ceramics recovered prior to the 1980s for additional information, and as such, it neither is intended, nor should it be perceived as a final assessment of the ceramics of the Cooper Lake Project.

METHODS

All sherds were individually examined and classified according to paste group/ware and subdivided according to their position on the parent form, descriptive categories (provisional types) and/or established type based on exterior surface treatment.

The ceramic subdivisions (paste groups or wares, provisional types or descriptive categories, and established types) correlate to ceramic units based on the Type-Variety Method (Wheat, Gifford, and Wasley 1958; Phillips 1958, 1970; Robertson 1980; Cliff, Perttala, and Winchell 1993; Winchell 1993). The method is based on the development of mutually exclusive temper, paste, and decorative variables. An underlying assumption is that more than one descriptive category cannot be present on a single vessel.

The methodological procedures, definition of terms, and ceramic descriptions are the same as

those used for materials recovered under contract DACW63-87-0017 since 1987. Paste groups, established types, and descriptive categories are tabulated according to previously established paste groups and/or provisionally established types which have been described in detail elsewhere (Cliff, Perttula, and Winchell 1993).

REANALYZED ASSEMBLAGES

Manton Miller Site (41DT1)

Fifty-five sherds were reanalyzed from Area A of the Manton Miller site (see Hyatt and Doehner 1975). The present analysis of the sherds from this site suggests that the ceramics do not vary significantly from other ceramics which have already been described in several recent Cooper Lake site reports (Cliff, Perttula, and Winchell 1993; Winchell 1993). In essence, the ceramics from the Manton Miller site fall within the general range of expected variability observed from more recently excavated sites. However, as will be demonstrated later, there are significant typological disparities between the analysis of the ceramics from the Manton Miller site and the previous analyses conducted in the 1970s.

Artifact Descriptions

Paste Group/Ware: Large Grog Tempered, Clay-Silt Paste (equivalent to Coarse Grog Tempered Ware).

Frequency: 31 sherds, including 1 rim.

Provenience: Units 71, Level 1; 144, Levels 1 and 2; 353, Level 1; 420, Level 1; 482, Levels 1 and 2.

Paste Description: Pastes are tempered with coarse (0.5-1.0 mm) to very coarse (1.0-2.0 mm) chunks of crushed sherds. The amount of grog relative to the clay matrix ranges between ca. 20% and 40%. The texture of the paste usually has a chunky look due to the large pieces of crushed sherd and their casts. On many occasions, the flat surface of the crushed sherds can be easily seen. The clay matrix of the paste is usually clear of mineral inclusions, although some silt (<0.063 mm) and/or very fine (0.063-0.125 mm) grains of quartz are occasionally present. Sometimes sherds have a slight sandy feel (due to small amounts of

silt to very fine quartz grains), but are never as abrasive as grit tempered paste sherds. The paste overall is semi-compacted but not crumbly and has a general hardness of 2 on the Mohs scale (i.e., can be scratched with a penny). Pastes are usually gray to dark gray in color.

Paste Group/Ware: Large Grog and Bone Tempered, Clay-Silt Paste (equivalent to Coarse Grog and Bone Tempered Ware).

Frequency: 4 sherds, no rims.

Provenience: Units 71, Level 1; 353, Level 1; and 420, Level 1.

Paste Description: Pastes are tempered with coarse (0.5-1.0 mm) to very coarse (1.0-2.0 mm) pieces of crushed sherd. The crushed sherd constitutes from 20% to 40% of the fabric bulk. In addition to the crushed sherd, small amounts of bone have been added to the paste. The visible bone fragments range in size from fine (0.125-0.25 mm) to coarse (0.5-1.0 mm). The proportion of bone relative to the grog is small, constituting less than 10% of the fabric bulk. Smaller amounts of mineral inclusions such as quartz (ranging from silts [<0.063 mm] to fine [0.125-0.25 mm]) particles are present in some of the pastes. As a result, some sherds have a slight sandy feel. The texture of the paste is chunky and semi-compacted and has a hardness of 2 on the Mohs scale (can be scratched with a penny). Minus the bone temper, this paste is indistinguishable from pastes belonging to the Coarse Grog Tempered Ware. The color of the paste is usually brown.

Paste Group/Ware: Large Grog Tempered, Grit Paste (equivalent to Coarse Grog Tempered Grit Paste Ware).

Frequency: 5 sherds, no rims.

Provenience: Units 71, Level 1; 144, Level 1; 420, Levels 1 and 2; 482, Level 1.

Paste Description: Pastes are lightly tempered with very coarse (1.0-2.0 mm) to medium (0.25-0.5 mm) chunks of crushed grog. This paste also contains a large proportion of very fine (0.063-0.125 mm) to fine (0.125-0.25 mm) size grains of quartz which constitutes approximately 40% of the fabric bulk. The grains are either rounded or angular and appear to be natural constituents of the clay matrix. The texture of the paste is fine and compact (not chunky) and has a hardness of 2.

Sherds have a gritty feel when rubbed. The color of the paste is dark gray, black, or brown.

Paste Group/Ware: Grit Paste.

Frequency: 4 sherds.

Provenience: Units 71, Level 1; 420, Level 1.

Paste Description: Pastes contain significant amounts (constituting 20% to 40% of the paste fabric) of quartz inclusions which range in size from very fine (0.063-0.125 mm) to fine (0.125-0.25 mm) grains. The quartz grains (which are rounded) appear to be natural inclusions in the paste, not deliberately added as temper. In some of the pastes there is the presence of some bone (fine- [0.125-0.25 mm] and medium- [0.25-0.5 mm] sized pieces). The amount of bone in the paste never exceeds 10% of the fabric bulk. Small amounts of grog occasionally appear in the paste (usually fine- [0.125-0.25 mm] to medium- [0.25-0.5 mm] sized pieces). The amount of grog in the paste (if it occurs) is very slight and never exceeds 5% of the fabric bulk. The paste texture is semi-compacted and grainy. Sherds have a sandy feel when rubbed. The paste has a hardness of 2. The color of the paste ranges from brown to black.

Paste Group/Ware: Small Grog Tempered, Silt Paste.

Frequency: 4 sherds.

Provenience: Units 353, Level 1; 420, Level 1; 482, Level 2.

Paste Description: Pastes in this group contain small bits of fine (0.125-0.25 mm) to medium (0.25-0.5 mm) crushed sherds. The amount of grog in the paste roughly constitutes 20% to 40% of the fabric. Other than the grog temper, the paste is fairly free of other aplastic inclusions such as quartz. However, small quantities of silt (<0.063 mm) to very fine (0.063-0.125 mm) grains of quartz occasionally occur in the paste. The texture of the paste is chunky but firm and has a hardness of 2 on the Mohs scale (can be scratched with a penny). Overall, this paste is very similar to the Coarse Grog Tempered Ware, differing only in the size of grog used as temper. The color of the paste is usually brown.

Paste Group/Ware: Bone Tempered, Silt Paste.

Frequency: 5 sherds.

Provenience: Units 420, Level 1; 482, Level 1.

Paste Description: Pastes are tempered with bone fragments which range from medium (0.25-0.5 mm) to coarse (0.5-1.0 mm). The amount of bone in the paste constitutes about 20% of the fabric bulk. In addition to the bone, there are occasional mineral inclusions (mostly quartz) in the paste. These inclusions will vary from very fine- (0.063-0.125 mm) to fine- (0.125-0.25 mm) sized particles. Grog does not appear to be a tempering agent in this particular paste group. Other than the bone and an occasional occurrence of mineral inclusions, the clay matrix is relatively clean. The paste is soft and has a hardness of 1 on the Mohs scale (can be scratched with the fingernail). The paste color is usually brown.

Paste Group/Ware: Untempered, Silt-Clay Paste.

Frequency: 2 sherds.

Provenience: Units 353, Level 1; and 482, Level 2.

Paste Description: The paste has a high clay content which is either void of mineral inclusions (and other kinds of tempering agents) or contains silt-sized (<0.063 mm) quartz particles. The amount of quartz in the paste is low, constituting less than 20% of the fabric. Overall, the paste is compact and has a hardness of 2. The color of the paste is usually brown.

Typological Observations

Table B-1 presents the paste groups compiled from the 1975 analysis of ceramics from the Manton Miller site (Hyatt and Doehner 1975: 20). Obvious disparities exist between paste groups and "temper" when compared to the data from the reanalysis (Tables B-2 and B-3). The most striking difference is the number and proportion of sand-tempered sherds reported in 1975 versus the number and proportion of the equivalent group (Grit Paste) observed in this study (see Table B-2). In contrast, grog-tempered (i.e., sherd-tempered)

TABLE B-1

Counts and Proportions of Paste Groups/Wares from the 1975 Analysis
of Ceramics from the Manton Miller Site (41DT1), by Temper Type

Temper	Number	Percent	Mean Thickness (mm)	Std. Dev. (mm)	Range (mm)
Sherd	6	12.00	6.90	1.15	5.7-9.0
Bone	2	4.00	6.15	1.91	4.8-7.5
Sand	44	84.00	7.33	1.35	5.1-9.9

SOURCE: Hyatt and Doehner (1975).

TABLE B-2

Counts and Proportions of Paste Groups/Wares from the 1990 Analysis
of Ceramics from the Manton Miller (41DT1) Site

Paste Group/Ware	Number	Percent	Mean Thickness (mm)	Std. Dev. (mm)	Range (mm)
Large Grog Tempered, Clay-Silt Paste	31	56.3	7.3	1.2	5-10
Large Grog and Bone Tempered, Clay-Silt Paste	4	7.2	8.9	0.1	8.5-9
Large Grog Tempered, Grit Paste	5	9.1	8.1	0.5	7.5-9
Grit Paste	4	7.3	6.3	0.9	5-8
Small Grog Tempered, Silt Paste	4	7.3	5.9	0.2	5.5-6
Bone Tempered, Silt Paste	5	9.1	7.1	1.2	5-8
Untempered, Silt-Clay Paste	2	3.6	5.0	—	5-5
Total	55	100.0	—	—	—

TABLE B-3

Occurrence of Surface Finish and/or Established Ceramic Types from the 1990 Analysis of Ceramics from the Manton Miller (41DT1) Site, by Paste Group/Ware

Paste Group/Ware	Smoothed	Pennington Punctate Incised	Monkstown (?)	Eroded
Large Grog Tempered, Clay-Silt Paste	29	—	—	2
Large Grog and Bone Tempered, Clay-Silt Paste	4	—	—	—
Large Grog Temper, Grit Paste	4	—	1	—
Grit Paste	4	—	—	—
Small Grog Temper, Silt Paste	4	1	—	—
Bone Temper, Silt Paste	5	—	—	—
Untempered, Silt-Clay Paste	2	—	—	—
Total	52	1	1	2

ceramics are clearly the dominant paste group observed in the 1990 analysis. No definitive explanation can be given at this time to explain the differences in the observed data from the 1975 (see Table B-1) and the 1990 (see Table B-2) analyses.

The original contention that the Manton Miller site contains an Early Ceramic (Terminal Archaic) component (Johnson 1962: 258-259, 267) cannot be reconfirmed at this time. No Williams Plain or other diagnostic Early Ceramic period types were identified in this assemblage. Nevertheless, Hyatt and Doehner (1975:79) acknowledged that Williams Plain ceramics had been identified at Cooper Lake sites (including Manton Miller ?), but that the ceramic type was never "conclusively shown to be stratigraphically early."

However, it should be pointed out that Area B of the Manton Miller site, which was alleged to have the highest concentration of ceramic material at the site and contained a large quantity of sherds identified as Williams Plain (Johnson 1962:264), was never re-excavated in 1973 (Hyatt and Doehner 1975:7). One should also note that the 1973 season was the last time the Manton Miller site was excavated.

Nevertheless, it seems very probable that there is an Early Caddoan component (Gibson Aspect; Alto and/or Sanders Focus occupation) at this site (Johnson 1962:265-268; Hyatt and Doehner 1975:28, 35-36). This can be verified by the presence of Pennington Punctate-Incised, Monkstown Fingernail Impressed, and possible Sanders Plain ceramics in this particular assemblage. Apparently, there were two other Early Caddoan decorated sherds (Crockett Curvilinear Incised and Canton Incised) recovered during the 1973 excavations (Hyatt and Doehner 1975:21, 28). Unfortunately, these two sherds were not found during reanalysis.

The Manton Miller site is one of two type sites which essentially defined the LaHarpe Aspect of northeast Texas (Johnson 1962). The LaHarpe Aspect was defined as a formative Archaic culture which developed in place from Middle to Late Archaic times (Johnson 1962:268-290). At the close of the so-called LaHarpe Aspect (the terminal Archaic), Johnson observed the beginnings of an early ceramic tradition in northeast Texas which he likened to Fourche Maline "Focus" defined in Oklahoma (Johnson 1962:269-270). Johnson based most of his assumptions about the terminal Archaic of the

LaHarpe Aspect on his excavations at the Manton Miller site (Johnson 1962:268).

Relatively little controlled excavation (only six 2 m x 2 m [6.6 ft x 6.6 ft] units with the addition of an extended area for recovery of a possible house structure) was carried out in 1973 on this important site. In fact, the Manton Miller site was considered to have been only partially tested during this time (Hyatt and Doehner 1975:81). As mentioned earlier, Area B of this site was never re-excavated in 1973, even though it was believed to have contained the highest concentration of cultural material, especially during pre- and Early Caddoan times (Johnson 1962:263, 267). Indeed, Area B was reported to have contained a midden composed "for the most part, of a black, humus-stained sand that contains a considerable quantity of cultural refuse" (Johnson 1962:263).

Johnson recovered more than 500 ceramic sherds (mostly from Area B) during the 1959 season (Johnson 1962: 258). The ceramic descriptions and photographs provided in Johnson (1962:258-260) show convincing examples of large sherds typed as Williams Plain and Coles Creek-like incised, as well as Sanders Plain and Sanders Engraved. Johnson's collections are housed at TARL and were not reexamined for this study. Unfortunately, during the 1973 season, less than 60 sherds were recovered in excavations. Almost all of these sherds are too small, making it difficult to do an adequate ceramic analysis (this was also noted by Hyatt and Doehner 1973:19). The ceramics from the Manton Miller site during the 1973 season (the last excavations at the site) are, for the most part, a very limited and unrepresentative sample for this site.

Tick Site (41DT6)

A total of 95 sherds were reexamined from the 1975 excavations at the Tick site (41DT6; Doehner and Larson 1978). Of these sherds, 84 were analyzed. The remaining 11 sherds were either too small (diameter < 0.5 in) or too eroded to be systematically analyzed. None of the 11 sherds were decorated, were parts of rims, or had any distinctive qualities about them. They were considered to be fragments of plain body sherds.

The ceramic types identified in the Tick site

sample are described below. Type descriptions already provided in the Manton Miller discussion (see above) are not repeated here.

Artifact Descriptions

Paste Group/Ware: Large Grog Tempered, Clay-Silt Paste (equivalent to Coarse Grog Tempered Ware).

Frequency: 40 sherds, including 3 rims.

Provenience: Units 0, 1-5, 6, 8-14.

Paste Group/Ware: Large Grog and Bone Tempered, Clay-Silt Paste (equivalent to Coarse Grog and Bone Tempered Ware).

Frequency: 12 sherds, no rims.

Provenience: Units 1, 4, 5, 8, 10, and 11.

Paste Group/Ware: Large Grog Tempered, Grit Paste (equivalent to Coarse Grog Tempered Grit Paste Ware).

Frequency: 5 sherds, no rims.

Provenience: Units 1, 4, 8, and 12.

Paste Group/Ware: Small Grog Tempered, Clay-Silt Paste (equivalent to Small Grog).

Frequency: 5 sherds, no rims.

Provenience: Units 2, 4, 8, and 11.

Paste Group/Ware: Bone Tempered, Silt Paste.

Frequency: 12 sherds, no rims.

Provenience: Units 2, 3, 4, 8, 10, and 11.

Paste Group/Ware: Grit Paste.

Frequency: 1 rim sherd.

Provenience: Unit 9.

Paste Group/Ware: Untempered, Silt-Clay Paste.

Frequency: 3 sherds, no rims.

Provenience: Units 8, 11, and 12.

Paste Group/Ware: Large Shell Tempered, Silt-Clay Paste.

Frequency: 1 body sherd.

Provenience: Unit 6.

Paste Description: Paste contains considerable amounts (20%-40% of paste bulk) of crushed shell. The shell inclusions are laminar and range in

length from 1 mm to 5 mm. Some of the shell has leached away leaving thin laminar voids. The paste has an approximate hardness of 1 (can be scratched with a fingernail) on the Mohs scale. The paste color of the sherd specimen is dark gray.

Paste Group/Ware: Small Grog Tempered, Grit Paste.

Frequency: 1 body sherd.

Provenience: Unit 1.

Paste Description: Pastes are tempered with fine (0.125-0.25 mm) to medium (0.25-0.5 mm) pieces of crushed sherd. Occasionally, coarse (5-1.0 mm) clunks of crushed sherd are present in the paste. The amount of grog in the paste constitutes between ca. 20% and 40% of the fabric bulk. There is also a considerable amount of mineral inclusions in the paste as well, consisting mostly of quartz grains which range in size from silt particles (<0.063 mm) to fine (0.125-0.25 mm) sand grains. The amount of quartz grains in the paste is roughly 20% relative to the remaining fabric. The quartz inclusions (all are rounded) appear to be natural constituents in the paste and were probably not deliberately added as temper. The texture of the paste is more even and less chunky than a regular small grog-tempered paste, and sherds have a slight sandy feel. The paste is semi-compacted and has a hardness of 2 on the Mohs scale (can be scratched with a penny). The paste is light gray in color.

Typological Observations

Tables B-4 and B-5 list the counts, proportions, and decorative attributes for the reanalyzed Tick Site (41DT6) ceramics. No detailed analysis of the 1978 ceramic analysis is available for comparison with the 1990 analysis. Only a few of the ceramics had been chipped (i.e., broken to expose the paste) for determination of paste and temper composition. The entire comments on the Tick site ceramics from the 1978 analysis are as follows:

Only one of the 92 ceramic fragments recovered from the Tick Site was identified as to type. This is a Sanders Engraved body sherd with smoothed

chocolate brown interior and exterior surfaces and an extremely dark brown core. The design motif is a series of parallel lines pitched in various directions. It is believed to date within the A.D. 800 - 1200 time period (Suhm and Jelks 1962:137).

The remaining portion of the ceramic component consists of plain sherds tempered with grog, grit, and some sand approximating the description of the Williams Plain type generated by Brown (1971:42) and Rohrbaugh (1973:3). The presence of these place occupation of the Tick Site during the ceramic pre-Caddo period (Doehner and Larson 1978:66).

Based on Brown's (1971) ceramic descriptions, this author would accept the provisional categorization that the majority of sherds from the Tick site are Williams Plain (Brown 1971: 42-58, 167-169). However, other lines of data such as the presence of arrow points (n=15) do not support a single Early Ceramic component at the Tick site (Doehner and Larson 1978:66). Therefore, it is likely that an Early Caddoan component is present at the site as well. The identification of a Sanders Engraved sherd (typed in the 1990 analysis as Large Grog Tempered, Clay-Silt Paste, Thin-Incised) and some extended burials also suggest the presence of a Caddo component at this site.

It should be noted that Brown (1971:167-168) believes Williams Plain to be identical to Krieger's (1947: 188-190) Sanders Plain, which suggests that the majority of the sherds at the Tick site could easily be Sanders Plain, which is an Early Caddo ceramic type of the Gibson Aspect.

The very brief 1978 analysis of ceramics from the Tick site offers no explanation why the majority of sherds were typed as Williams Plain, despite some evidence that there was a Early Caddoan occupation at the site. It would have been more conventional to have typed the 1978 ceramics as Sanders Plain.

Finally, the Tick site had both flexed and extended burials (Doehner and Larson 1978:58-59), suggesting that it may have been used in the Early Ceramic period as well as in

TABLE B-4

Counts and Proportions of Paste Groups/Wares from the 1990 Reanalysis
of Ceramics from the Tick Site (41DT6)

Paste Group/Ware	Number	Percent	Mean Thickness (mm)	Std. Dev. (mm)	Range (mm)
Large Grog Tempered, Clay-Silt Paste	40	47.6	8.6	1.7	5-12
Large Grog and Bone Tempered, Clay-Silt Paste	12	14.3	8.5	1.4	7-11
Large Grog Tempered Grit Paste	5	5.9	8.0	1.9	6-10
Small Grog Tempered, Clay-Silt Paste	5	5.9	6.8	2.1	5-10
Bone Tempered, Silt Paste	12	14.3	7.5	1.7	7-11
Grit Paste	1	1.2	5.0	-	-
Untempered, Silt-Clay Paste	3	3.6	7.1	1.9	6-10
Large Shell Tempered, Silt-Clay Paste	1	1.2	4.0	-	-
Small Grog Tempered, Grit Paste	1	1.2	8.0	-	-
Varia	4	4.8	5.7	0.96	5-7
Total	84	100.0	-	-	-

TABLE B-5

Occurrence of Surface Finishes and Decorative Attributes from the 1990 Reanalysis
of Ceramics from the Tick Site (41DT6), by Paste Group/Ware

Paste Group/Ware	Smoothed	Burnished	Thin- Incised	Finger- Impressed	Red- Filmed
Large Grog Tempered, Clay-Silt Paste	19	20	1	1	-
Large Grog and Bone Tempered, Clay-Silt Paste	9	3	-	-	-
Large Grog Tempered, Grit Paste	5	1	-	-	-
Grit Paste	1	-	1	-	-
Small Grog Temper, Silt Paste	4	1	-	-	-
Bone Tempered, Clay-Silt Paste	7	3	-	-	1
Untempered, Silt-Clay Paste	2	1	-	-	-
Large Shell Tempered, Silt-Clay Paste	1	-	-	-	-
Small Grog Tempered, Grit Paste	1	1	-	-	-
Varia	2	2	-	-	-
Total	51	32	2	1	1

Early Caddoan times. Unfortunately, no ceramics were found in association with any of the burials. Ceramics recovered in association with another burial when the site was excavated in the 1950s (Harris 1955; Doehner and Larson 1978:59), once again unfortunately, were not identified, nor was information provided as to whether the burial was flexed or extended.

Spike Site (41DT16)

A total of 308 sherds were reexamined from the 1976 excavations (Doehner, Peter, and Skinner 1978) at the Spike site (41DT16). Of these sherds, 224 (73%) were chosen for reanalysis. The remaining 86 sherds were either too small (diameter <0.5 in) or too eroded for systematic analysis. None of these sherds were decorated or parts of rims, nor did any exhibit unusual qualities. They were considered to be fragments of plain body sherds.

In making comparisons with the 1976 analysis of the Spike site (41DT16) ceramics, sherds in this analysis were broken down into paste groups and listed. Definitions of most temper/paste groups within the assemblage are provided above (see the Manton Miller and Tick site samples). Definitions on new temper/paste groups not represented in the Manton Miller and Tick assemblages are provided below.

Artifact Descriptions

Paste Group/Ware: Large Grog Tempered, Clay-Silt Paste (equivalent to Coarse Grog Tempered Paste).

Frequency: 118 sherds, including 10 rims.

Provenience: Units 0, 1-4, 6-13, 15-21.

Paste Group/Ware: Large Grog and Bone Tempered, Clay-Silt Paste (equivalent to Coarse Grog and Bone Tempered Paste).

Frequency: 13 sherds, including 2 rims.

Provenience: Units 1, 4, 6, 7, 9, 15, 16, 18, and 20.

Paste Group/Ware: Large Grog Tempered, Grit Paste (equivalent to Coarse Grog Tempered Grit Paste).

Frequency: 6 sherds, no rims.

Provenience: Units 8, 12, 15, 16, and 18.

Paste Group/Ware: Grit Paste.

Frequency: 21 sherds, including 5 rims.

Provenience: Units 2, 4, 7, 9, 10, 12, 14-17, and 19.

Paste Group/Ware: Bone Tempered, Grit Paste.

Frequency: 3 sherds, including 1 rim.

Provenience: Units 4, 10, and 17.

Paste Description: Pastes are tempered with fine (0.125-0.25 mm) to medium (0.25-0.5 mm) chunks of crushed bone. The amount of bone in the paste is small and constitutes no more than 20% of the fabric bulk. There is also a considerable amount of mineral inclusions in the paste as well, consisting mostly of quartz grains which range in size from silt particles (<0.063 mm) to fine (0.125-0.25 mm) sand grains. The amount of quartz grains in the paste constitutes roughly 20% of the fabric bulk, and as a result, sherds have a slight sandy feel. The quartz inclusions appear to be natural constituents in the paste and were probably not deliberately added as temper. The texture of the paste is more even and less chunky than the Bone-Tempered, Clay-Silt Paste ware. The paste is semi-compacted and has a hardness of 2 on the Mohs scale (can be scratched with a penny). The color of the paste is brown.

Paste Group/Ware: Small Grog Tempered, Clay-Silt Paste (equivalent to Small Grog Tempered Paste).

Frequency: 37 sherds, no rims.

Provenience: Units 0, 2, 4, 6-10, 14, 15, 17, 19, 20, and 21.

Paste Group/Ware: Bone Tempered, Clay-Silt Paste (equivalent to Bone Tempered Paste).

Frequency: 16 sherds, including 1 rim.

Provenience: Units 1, 4, 6, 10, 16, and 17.

Paste Group/Ware: Untempered, Silt-Clay Paste.

Frequency: 6 sherds, including 1 rim.

Provenience: Units 7, 10, 13, 15, and 22.

Paste Group/Ware: Small Shell Tempered, Silt-Clay Paste.

Frequency: 1 body sherd.

Provenience: Unit 6.

Paste Description: Paste contains considerable amounts (between 20% to 40% of paste bulk) of pulverized shell. The shell inclusions are very small, ranging between coarse (1-0.5 mm) and medium (0.5-0.25 mm) particles which tend to be more chunky than laminar. On a visual inspection, the shell inclusions can be easily mistaken for bone. However, under magnification, flatter, laminar shell particles can be detected. The paste matrix is usually free of mineral inclusions. The paste has an approximate hardness of 1 (can be scratched with a fingernail) on the Mohs scale. The paste color of the sherd is black.

Paste Group/Ware: Limestone Tempered, Silt-Clay Paste.

Frequency: 1 body sherd.

Provenience: Unit 6.

Paste Description: Paste contains small amounts (approximately 20% of the fabric bulk) of crushed limestone. The size of the limestone inclusions are variable and range between coarse (1-0.5 mm) and fine (0.25-0.125 mm) particles. The shape of the limestone inclusions tends to be angular, and it appears that the limestone was added to the paste as temper. On visual inspection, the limestone looks very much like pieces of grog; however, when hydrochloric acid is applied, the pieces effervesce. The paste matrix is usually free of mineral inclusions, but fine (0.25-0.125 mm) grains of quartz are rare. The paste has an approximate hardness of 1 (can be scratched with a fingernail). The color of the paste ranges from dark gray to black.

Paste Group/Ware: Varia/Unidentified.

Frequency: 2 body sherds, no rims.

Provenience: Unit 0.

Typological Observations

Tables B-6, B-7, and B-8 list the paste groups, the descriptive categories, and established types for the Spike site. Based on the 1976 analysis of the same assemblage, paste groups or "temper" divisions can be compiled from the

undecorated body sherds (see Table B-6). In general terms, it appears that little comparability exists between paste groups compiled in 1976 and those compiled in 1990 (see Tables B-7 and B-8). The dominant paste group in the 1976 analysis is the Unidentified group, which constitutes 43.1% of the entire assemblage, excluding decorated sherds. It is followed by the Coarse and Grit Tempered group, which constitutes 19.4% of all undecorated sherds. In the 1990 analysis the dominant paste is the Large Grog Tempered Clay-Silt Paste group, which constitutes 52.8% of the entire assemblage. This is followed by the Small Grog Tempered, Clay-Silt Paste group, which constitutes 16.5% of the entire assemblage.

At this time no explanation can be given for the disparities concerning paste groups between the two analyses of 1976 and 1990. However, it should be noted that within the 308 sherds recorded in this assemblage, less than 20 sherds were chipped (i.e., broken to expose the paste) during the 1976 analysis.

Based on the 1976 ceramic analysis, the Spike site was categorized as an early Caddo (Gibson Aspect) occupation (Doehner, Peter, and Skinner 1978:99). This conclusion was derived from the few diagnostic decorated sherds which could be identified as either Crockett Curvilinear Incised, Dunkin Incised, and Canton Incised (Doehner, Peter, and Skinner 1978:99). Overall, the 1990 analysis supports this conclusion, although no decorated sherds were identified as either Dunkin or Canton Incised. This may be due to the author's more conservative view that the incised sherds identified were non-diagnostic (see incised sherds, Table B-8). Conversely, the author identified several punctated and incised sherds (noted in the 1976 season report as such, Doehner, Peter, and Skinner 1978) as Pennington Punctated-Incised.

The Spike site proved to have an extensive cultural deposit, recorded on the summit of the site at a depth of 1.2 m (3.9 ft; Doehner, Peter, and Skinner 1978:72). Based on the vertical distribution of projectile points, there appeared to be some stratification between a possible Late Archaic occupation in the lower levels versus the Early Caddoan occupation in the upper levels (Doehner, Peter, and Skinner 1978:72, 100). However, the 1978 authors believed that vertical differences seen in the overall artifacts were

TABLE B-6

Counts and Proportions of Undecorated Body Sherds from the 1976 Analysis
of Ceramics from the Spike Site (41DT16), by Paste (Temper) Group

Paste Group/Ware (Temper)	Number	Percent	Sherd Thickness (mm)
Coarse and Grit Tempered (?)	83	29.9	NA
Compact Coarse and Grit Tempered	2	0.7	NA
Bone and/or Shell and Grog Tempered	54	19.4	5-12
Bone and/or Shell Tempered	16	5.8	5-8
Crushed Bone and Grit Tempered	3	1.1	NA
Unidentified	120	43.1	NA
Total	278	100.0	-

SOURCE: Doehner, Peter, and Skinner (1978).

TABLE B-7

Counts and Proportions of the Paste Groups/Wares from the 1990 Analysis
of Ceramics from the Spike Site (41DT16)

Paste Group/Ware	Number	Percent	Mean Thickness (mm)	Std. Dev. (mm)	Range (mm)
Large Grog Tempered, Clay-Silt Paste	118	52.8	8.7	1.7	4-16
Large Grog and Bone Tempered, Clay-Silt Paste	13	5.8	8.8	1.7	6.5-12
Large Grog Tempered, Grit Paste	6	2.7	7.2	1.5	4.5-8.5
Small Grog Tempered, Clay-Silt Paste	37	16.5	7.4	1.6	5-11.5
Bone Tempered, Clay-Silt Paste	16	7.1	7.5	1.4	5-10
Grit Paste	21	9.4	6.6	1.6	4-11
Bone Tempered, Grit Paste	3	1.3	7.0	3.4	5-11
Untempered, Silt-Clay Paste	6	2.7	4.9	0.9	4-6.5
Small Shell Tempered, Silt-Clay Paste	1	0.4	—	—	6.5
Limestone Tempered, Silt-Clay Paste	1	0.4	—	—	6
Varia	2	0.9	5.7	0.957	5-7
Total	224	100.0	—	—	—

TABLE B-8

Occurrence of Surface Finishes, Decorative Attributes, and/or Established Ceramic Types
from the 1990 Analysis of Ceramics from the Spike Site (41DT16), by Paste Group/Ware

Temper/Paste Group or Ware	Smoothed	Burnished	Thin Engraved	Thick Engraved	Thin Incised	Fingernail-Imprinted	Punctate	Red-Filmed	Rippled
Large Grog Tempered, Clay-Silt Paste ^a	69	45	1	-	1	1	-	-	-
Large Grog and Bone Tempered, Clay-Silt Paste	10	2	-	-	1	-	-	-	-
Large Grog Tempered, Grit Paste	5	1	-	-	-	-	-	-	-
Grit Paste	12	2	-	-	2	-	-	-	1
Small Grog Tempered, Clay-Silt Paste ^b	22	10	2	2	1	-	-	-	-
Bone Tempered, Clay-Silt Paste	8	5	-	-	1	-	1	1	-
Bone Tempered, Grit Paste	2	-	-	-	-	1	-	-	-
Untempered, Clay-Silt Paste	2	4	-	-	-	-	-	-	-
Small Shell Tempered, Clay-Silt Paste	-	-	-	-	1	-	-	-	-
Limestone Tempered, Clay-Silt Paste	-	1	-	-	-	-	-	-	-
Varia	2	2	-	-	-	-	-	-	-
Total	132	72	3	2	7	2	1	1	1

^a Includes one Crockett Curvilinear Incised sherd.

^b Includes four Pennington Punctate Incised sherds

"more the result of bioturbation processes than sequential cultural deposition" (Doehner, Peter, and Skinner 1978:72, 100).

This vertical distribution of artifacts may indeed have been caused by natural processes; however, this author is troubled by the fact that no block excavations were performed on the summit of the site (or in other favorable areas) to obtain a substantial number of artifacts within contiguous squares, which in turn would have provided an adequate sample of artifacts for seriation analyses. A seriation analysis could have indicated whether artifacts such as projectile points and ceramic types were superimposed. Seriation types of analyses are currently being employed on Texas sites and could prove useful in establishing vertical co-association of temporally diagnostic artifacts, even when bioturbation has been a problem.

Unfortunately, excavation squares on the Spike site were discontinuous and scattered widely across the site (Doehner, Peter, and Skinner 1978:73). The excavation units were 1 m x 1 m (3.3 ft x 3.3 ft) squares which in turn diminished the number of artifacts per unit. As a consequence, even though there was a substantial number of ceramics from this site, ceramic seriation is not possible.

Examination of a number of ceramics from several sites suggests that there are basic, near-mutually exclusive paste groups within the Cooper Lake Project area which can be empirically defined upon the presence/absence of aplastic inclusions. It is quite possible that these paste groups are temporally significant. A site such as Spike, which had over 1 m (3.3 ft) of cultural deposits, would have been an ideal place to test this particular hypothesis. Other temporally significant factors such as the vertical position of certain established ceramic types or provisional types could have also been tested at this site. In any case, it is possible that the Spike site may have contained an intact sequence (irrespective of how much bioturbation took place) extending from the Late Archaic to the Early Caddoan periods.

The authors of the 1976 season report are to be commended for their pioneering work on the Spike site, and it should be noted that this site was only tested in 1976 (Doehner, Peter, and Skinner 1978:72). Overall, their analysis of the lithics and

fauna from this site seems thorough and much attention was devoted to these particular data sets. However, the ceramic analysis is very preliminary in content and fails to define any of the techniques or methods used on how the ceramics were analyzed. Furthermore, the ceramic descriptions do not define terms or particular aspects of the ceramics which are critical in determining what this ceramic assemblage contains. In the final analysis, a ceramic study, such as the one reported in 1978, fails to convey meaningful information which can be used for a basic ceramic assessment or for comparative purposes.

SUMMARY OF CERAMIC REPORTS PRIOR TO 1980

The cursory and preliminary nature of the ceramic analyses conducted for the Manton Miller (Hyatt and Doehner 1975), Tick (Doehner and Lawson 1978), and Spike (Doehner, Peter, and Skinner 1978) sites are typical of the Cooper Lake ceramic analyses conducted between 1971 and 1978. As these ceramic reports are very brief and do not adequately characterize the ceramic assemblages, it is very difficult to compare the ceramic data in anything but a summary manner. The reports also reflect a serious lapse in systematics concerning how the ceramics were analyzed. This is self-evident on practically every ceramic report in the Cooper Lake literature generated prior to the 1980s, except for the ceramic analyses reported by Hyatt, Butler, and Mosca (1974), which seem to be the most consistent. There are also glaring inconsistencies between particular site reports concerning the various ceramic groups, primarily as regards differences in paste composition. For example, the 1974 ceramic report on the Cox site reveals that 72.6% of the sherds from that site were grog tempered, and that only 3.0% were sand tempered (Hyatt, Butler, and Mosca 1974: 52). In the 1978 ceramic report on the same site (Doehner and Larson 1978), only 11.8% of the ceramics are listed as grog tempered, while 75.2% are sand tempered (Hyatt and Doehner 1975:27). In the 1978 report (Doehner, Peter, and Skinner 1978), two sites, not more than 1.5 km (0.9 mi) apart from one another and containing the largest collections of ceramics, appear to have had

radically different paste group proportions (Doehner, Peter, and Skinner 1978). The Luna site (total assemblage=940) was reported to have a predominance of grit/grog tempered sherds (63%), while at the Spike site (total assemblage=310) ca. 52% of the 120 analyzed sherds that were unidentified according to paste were termed "coarse and grit tempered," with "grog and bone temper appear[ing] infrequently" (Doehner, Peter, and Skinner 1978:98, 124). Additionally, 34% of the sherds from the Spike site were categorized as "bone and/or shell and grog tempered" by Doehner, Peter, and Skinner (1978:98).

Generally, it appears that ceramics examined from Cooper Lake between 1972 and 1976 received less-intensive analysis than did the lithic artifacts and faunal materials from the area, as reflected by the relative degree and amount of reporting given to these materials. To compound this problem, in the final synthesis of the 1978 evaluation of the Cooper Lake archaeological project, no mention of the ceramic data appears in the volume's discussion of intersite variability (Doehner, Peter, and Skinner 1978:181-186).

The minimum amount of attention on the ceramics is understandable if one realizes that the persons involved tended to be more familiar with certain aspects of lithic and faunal analyses than with the important nuances of ceramic analysis. In contrast to the ceramics and perhaps owing to professional biases of the analysts, the lithic and faunal data sets were also viewed as being more amenable to questions concerning site function and local resource utilization. Examination of the research designs from all of the Cooper Lake reports published from 1974 to 1978 reveals that the emphasis on function, resource utilization, and settlement pattern took priority over taxonomic-typological concerns, especially in regard to ceramics.

During the late 1960s and into the 1970s, taxonomic-typological studies (including ceramic typologies) in archaeology began to lose ground to more ecologically-oriented studies dealing with function and adaptation. Also, the surge toward radiometric dating of sites overshadowed more traditional means of using material culture as a dating technique. This latter type of orientation was the result of the so-called "Binfordian Revolution" which more or less de-coupled

typologists from the mainstream of "state of the art" archaeology (see Binford 1968, especially his discussion of Griffin; also see Willey and Sabloff 1978 and their "historical" placement of the "Classificatory-Historical Period" in the development of archaeological theory). As a result of the "New Archaeology," typological studies which used ceramics as indicators of time and space (which in turn recorded the nature, movements, and influences of cultures in the archaeological record), became passé. Based on this assessment of American archaeology during the late 1960s and 1970s, the lack of detailed ceramic analyses seen in the Cooper Lake reports was a sign of the times which permeated CRM work as well as academic research.

Unlike the Lower Mississippi Valley, where excellent ceramic typologies and sequences have been established (Ford 1936, 1951; Ford and Willey 1941; Phillips, Ford, and Griffin 1951; Phillips 1970), areas in northeast Texas such as Cooper Lake (which has been professionally studied since at least 1951) seriously lack a synthetic regional ceramic typology or sequence. More recent typological and seriation ceramic studies in other parts of Texas, such as the Upper Texas Coast, are proving once again that such studies are feasible and are useful for understanding the late prehistory of an area (Aten 1983).

Answers to questions of whether there was a true Early Ceramic occupation in the Cooper Lake area, or determinations of the true cultural affiliation of ceramic-bearing sites therein, can only be accomplished via comprehensive, systematic ceramic studies. If a regional and chronological sequence for the Cooper Lake ceramics can be established, then a better understanding can be obtained on how forest-fringe area populations living along the South Sulphur River functioned and adapted to the Blackland Prairie and Post Oak Forest biotic provinces. The reanalysis of the ceramics has enhanced site evaluations by shedding new light on the types of additional information these ceramic collections hold. It is hoped that any comparative and analytical data which may be obtained from additional reanalysis of these collections will be of significance in the regional and chronological sequence.

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Reanalysis of Cooper Lake Delivery Order Number 7 Lithic Artifacts

David H. Journey, Sue Linder-Linsley, and
William Young

Appendix

C

Projectile points were pulled from nine sites (41DT1, 41DT6, 41DT14, 41DT16, 41DT36, 41DT52, 41DT78, 41DT80, and 41HP88) which have large assemblages and are relevant for the reanalysis questions outlined in the Research Design. William Young identified these points by diagnostic type and raw material. Length, width, and thickness measurements of each point were also recorded. The points were packaged and re-boxed according to SMU's new curation requirements (Westbury and Crass 1990). There are a total of 10 boxes of projectile points from the Cooper Lake project currently housed at SMU (box numbers 1001, 1015, 1065, 1275, 1301, 1415, 1615, 1617, 1618, 1619).

The assignment of a point type is a process that primarily includes individual interpretation. That is, each lithic specialist will be relatively consistent in his typing of points, but variations between individual analysts can result in the same point being categorized differently. In order to have consistent type identification across the project, the old points, which were initially typed by several different analysts, were retyped by one individual.

In this area of Texas, where Uvalde gravel (Ogallala quartzite, petrified wood, and some chert) is the only material available, there are some specific problems that occur in trying to type artifacts. Central Texas' knapping authorities, J.

B. Sollberger (personal communication 1990) and David Hartig (personal communication 1990), indicate that it is very difficult to obtain a desired shape when knapping raw materials procured from Uvalde gravel deposits. The difficulty in flaking the base to produce the stems and barbs out of Ogallala (especially on arrow points) illustrates this problem very well.

For example, the difference between the Bonham and Alba types is based solely on stem width, which may not be a trait of point morphology but rather a constraint of the material. Both point types apparently are diagnostic of the same time period, so there is no chronological misidentification. Conversely, Bonham versus Perdiz does create a time problem. In typing this group, Perdiz occurred very rarely, and the few Perdiz points that are typed are of the East Texas variant, not the Central Texas variant. The Central Texas Perdiz tend to be larger with stems that are more contracting and pointed, while the East Texas Perdiz tend to have a straight-sided stem, a rounded base and are smaller with short stubby blades, possibly resharpened. The stems on these Perdiz grade into Bonham stems and could cause a time problem if typing were based solely on stem width. Table C-1 lists all the point types identified in this reanalysis and their associated time periods (after Turner and Hester 1985, and others).

TABLE C-1

Temporal Associations of Projectile Point Types
from Cooper Lake Site Assemblages Reanalyzed
Under Delivery Order Number 7

Point Type	Time Range ^a	Cultural Period
Alba	A.D. 1000-1300	Late Prehistoric
Bassett	A.D. 1400-1700	Late Prehistoric
Bonham	A.D. 1200-1400	Late Prehistoric
Catahoula	A.D. 700-1100	Late Prehistoric
Cliffton	—	Late Prehistoric
Colbert	A.D. 950-1585	Late Prehistoric
Cuney	—	Late Prehistoric into Historic
Dawson	—	Middle Archaic ^b
Edgewood	—	Transitional Archaic
Edwards	A.D. 960-1040	Late Prehistoric
Elam	—	Late Archaic
Fresno	—	Late Prehistoric
Friley	A.D. 700-1100	Late Prehistoric
Gary	2500 B.C. to A.D. 700-800	Middle to Trans. Archaic
Hayes	—	Late Prehistoric
Homan	A.D. 1000-1300	Late Prehistoric
Kent	2000 B.C. to A.D. 500	Middle to Trans. Archaic
Marshall	1000 B.C.	Middle Archaic
Morrill	—	Early to Mid Archaic
Motley	1500 B.C. to 500 B.C.	Middle to Late Archaic
Perdiz	A.D. 1200-1500	Late Prehistoric
Scallorn	A.D. 700-1200	Late Prehistoric
Steiner	—	Late Prehistoric
Talco	—	Late Prehistoric into Historic
Trinity	—	Middle Archaic
Yarbrough	—	Early Archaic ^c
Young	—	Late Prehistoric
Non-Texas	Unknown	—

^a Approximate, specified when available and/or when time range differs from general time period ascription

^b Possible ascription.

^c May also extend into later times.

The same problem also occurs between the Colbert, Scallorn, and Catahoula types, as is illustrated by multicomponent sites like 41HP137 and, especially, 41DT124. All of these points occur at about the same time, and the range of variation could be a cultural dialect, or there may be some micro-chronological significance in the variation.

Distinguishing between Steiner and Friley points is also problematic due to a number of factors. Serration, which is generally a good trait by which to distinguish between these two types, cannot be used in this case since almost every arrow point in this collection has some form of serration. Another typological trait, the form of the stem, must be disregarded as well because both Steiner and Friley points from this area vary from small contracting to slightly expanding stems. Therefore, the only trait indicator that can be used to distinguish one point from another is the form of the barb or shoulder of the point. Broken points do not lend themselves to adequate typing.

Finally, arrow preforms from this area could comfortably fit into either the Cliffton or Young types, but this analyst uses the broad category "arrow preform." The Cliffton type is presumably a preform for Perdiz, but there are very few Perdiz points (possibly the only few identified in this analysis are from 41HP175 and 41HP158E). On the other hand, the Catahoula and Colbert types can be easily manufactured from the Cliffton preform. Steiner and especially Friley points can be manufactured from the Young preform. The points from 41DT80 are an example of this. The majority of the types at this site are preforms and Friley points. The coarse Uvalde raw material appears to have caused some minor difficulties in the production of the stems—and in some cases, the barbs—of these specimens. Overall, however, the points manufactured out of this raw material grade into each other.

Table C-2 gives an overview of the available projectile point measurements and Figure C-1 shows the correlation between mean length and width of point types. Table C-2 and Figure C-1 complement each other and provide basic quantification of the range of variability of the defined types for specimens which are complete (or nearly so) and for assemblages with enough observations to merit statistical examination.

TABLE C-2
Summary of Metric Data Obtained from Points Reanalyzed under Delivery Order Number 7

Point Type	Total (n)	Length			Width			Thickness			Length to Width Ratio		
		Range	Mean	Std. Dev.	Range	Mean	Std. Dev.	Range	Mean	Std. Dev.	Range	Mean	Std. Dev.
Alba	28	15-26	21	3.321	11-21	16	2.577	2-5	4	0.797	0.882-1.857	1.380	0.256
Bonham	23	15-25	20	2.954	10-17	14	1.908	2-4	3	0.658	1.071-2.000	1.558	0.269
Catahoula	17	17-27	23	5.508	13-22	20	3.147	3-5	4	0.640	N/A	N/A	N/A
Clifton	6	21-28	25	3.421	12-28	20	5.164	3-6	5	1.169	1.000-1.830	1.443	0.304
Colbert	14	17-22	19.5	2.082	11-23	16.8	3.011	2-4	3.455	0.688	0.870-1.467	1.168	0.622
Friey	7	19-32	26.33	6.658	13-18	16.167	1.722	3-5	3.833	0.752	1.461-1.52	1.663	0.210
Gary	127	32-60	42	6.214	1-47	24	6.570	5-17	8	1.835	1.162-41.00	2.553	5.503
Kent	5	46-47	46.5	0.707	16-27	22.25	4.646	7-11	9.25	1.708	1.741-1.917	1.829	0.124
Morri	7	N/A	63	N/A	16-28	24.375	4.373	7-11	9	1.732	N/A	N/A	N/A
Perdiz	8	19-29	24	4.397	13-19	16.5	2.646	3-5	3.571	0.787	1.056-1.692	1.425	0.330
Steiner	5	17-25	20.66	4.041	12-18	15	2.449	3-5	3.6	0.894	1.389-1.417	1.403	0.020
Yarbrough	9	38-56	46.4	7.503	18-25	21.571	2.637	6-11	8	2.082	1.880-2.333	2.086	0.184

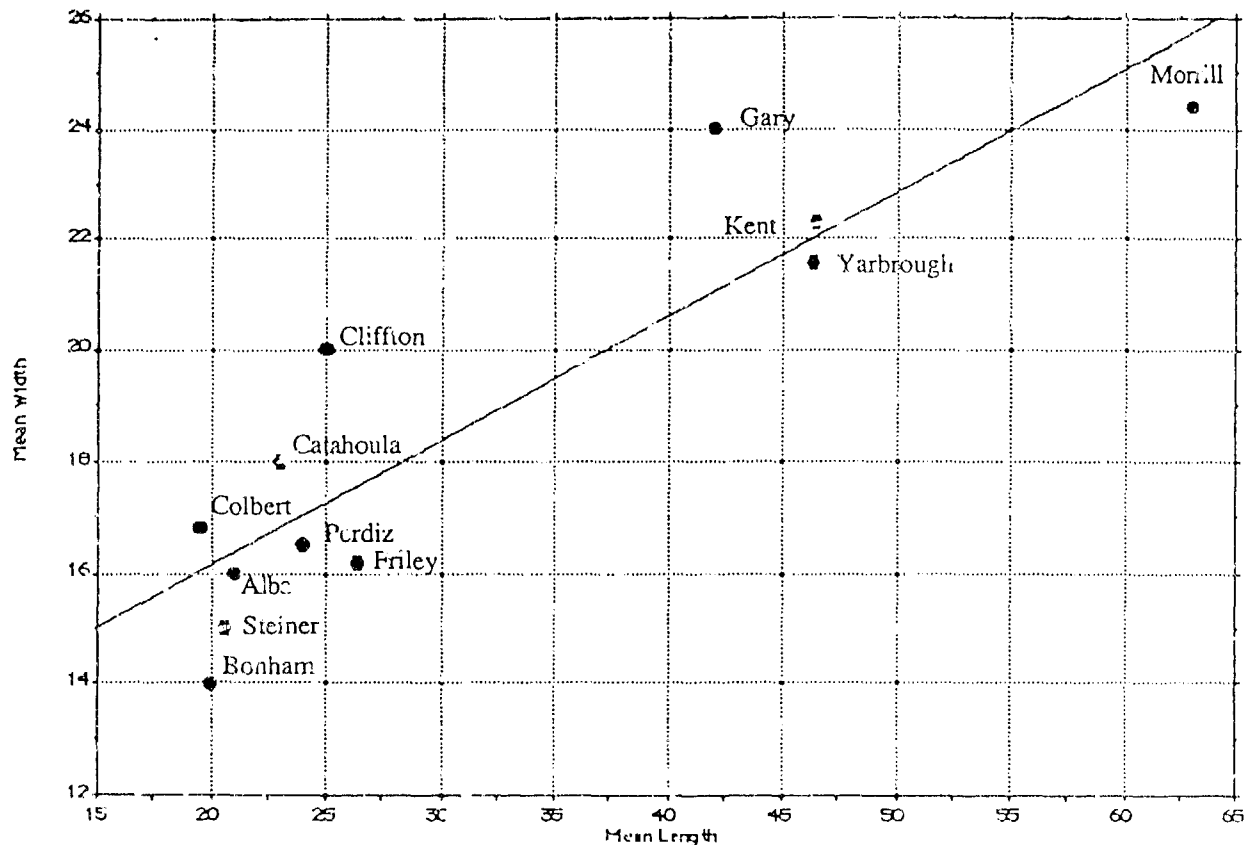


Figure C-1. Mean length vs. mean width for selected projectile points reanalyzed under Delivery Order Number 7.

Dart points are nearly double the largest arrow point varieties. The Kent and Yarbrough point types are the longest, but are relatively narrower than the Morrill and Gary point types (see Figure C-1). In fact, Kent and Yarbrough are extremely close in the linear regression program (Statview) shown in Figure C-1.

Arrow points appear to cluster into two morphologically distinct groupings: (1) longer types (Friley, Perdiz, Clifton, Catahoula), with mean lengths of 26.3 mm, 24 mm, 25 mm, and 23 mm, respectively; and (2) shorter types (Alba, Bonham, Steiner, Colbert) with mean lengths of 21 mm, 20 mm, 20.6 mm, and 19.5 mm, respectively. Figure C-1 indicates that the Perdiz point type is closest to the length/width linear regression, from dart points to arrow points. Bonham and Clifton are morphologically distinct outliers.

Generally, Figure C-1 suggests that certain projectile point types share morphological affinity

and may indicate cultural or technological evolution or responses to physical needs. Kent and Yarbrough points are similar. Gary and Morrill are morphologically distinct outliers. There is a distinct gap in the physical measurements of dart and arrow points at Cooper Lake, implying a radical evolution or revolution in projectile technology. The Clifton, Catahoula, Perdiz, and Friley point types are the widest and longest. The Alba, Steiner, and Bonham are shorter and narrower. The Colbert is a relative outlier.

Table C-3 and Figure C-2 contain information on the frequency of point types. Table C-3 and Figure C-2 complement each other and provide the basic quantification of the projectile point assemblage. Dart points comprise 55.3% of the assemblage followed by large arrows (13.4%), small arrows (19.7%), and undifferentiated arrows (11.6%).

Four dart point types (Morrill, Kent, Yarbrough, and Gary) comprise the majority of

TABLE C-3

Frequency of Projectile Points from Cooper Lake Sites Reanalyzed Under Delivery Order Number 7
by Type and Site

Point Type	HP88	DT1	DT6	DT14	DT16	DT36	DT52	DT78	DT80	Total
Alba	—	2	2	—	5	—	13	—	6	28
Eassett	—	—	—	—	1	—	1	—	—	2
Bonham	—	7	4	—	2	—	6	—	4	23
Catahoula	4	—	—	—	3	—	8	—	2	17
Cliffton	—	—	—	—	2	—	1	—	3	6
Colbert	—	3	2	—	4	—	4	—	1	14
Cuney	—	—	—	—	2	—	—	—	—	2
Dawson	—	—	—	—	—	—	2	—	—	2
Edgewood	—	—	—	—	1	—	1	—	—	2
Edwards	—	—	—	—	—	—	1	—	—	1
Elam	—	1	1	—	—	—	—	—	—	2
Fresno	—	1	—	—	—	—	1	—	—	2
Friley	—	—	1	—	2	—	—	—	4	7
Gary	2	4	35	5	35	2	40	3	3	127
Hayes	—	—	—	—	—	—	2	—	—	2
Homan	—	—	—	—	1	—	—	—	—	1
Kent	—	2	—	1	—	—	2	—	—	5
Marshall	—	—	1	—	—	—	—	—	—	1
Morrill	1	—	—	2	—	1	3	—	—	7
Motley	—	1	—	—	—	—	—	—	—	1
Perdiz	—	2	—	—	—	—	6	—	—	8
Steiner	—	—	—	—	2	—	2	—	1	5
Talco	—	—	—	—	—	—	2	—	—	2
Trinity	—	—	1	—	—	—	—	—	—	1
Yarbrough	—	—	—	5	1	—	3	—	—	9
Young	—	1	—	—	1	—	1	—	—	3
Non-Texas	—	—	—	—	1	—	—	—	—	1
Unknown	—	—	—	—	—	—	—	—	3	3
Total	7	24	45	13	63	3	99	3	27	284

this assemblage. Other incidental dart point types include Dawson (n=2), Edgewood (n=2), Elam (n=2), Marshall (n=1), Motley (n=1), and Trinity (n=1). Gary dart points are the dominant point type (80.9%). The Yarbrough type makes up 5.7% of the dart point assemblage, and the six additional dart point types mentioned above comprise 5.7% as well. Morrill (4.5%) and Kent (3.2%) dart points round out the assemblage.

In the large arrow point assemblage, the Catahoula type is most frequent (44.7%) type. The Perdiz (21.1%), Friley (18.4%), and Cliffton (15.8%) types are next most frequent. The Colbert (n=14) is transitional among categories.

In the small arrow point assemblage, the Alba (50%) and Bonham (41.1%) types are most common. The Steiner ranks third at 8.9%.

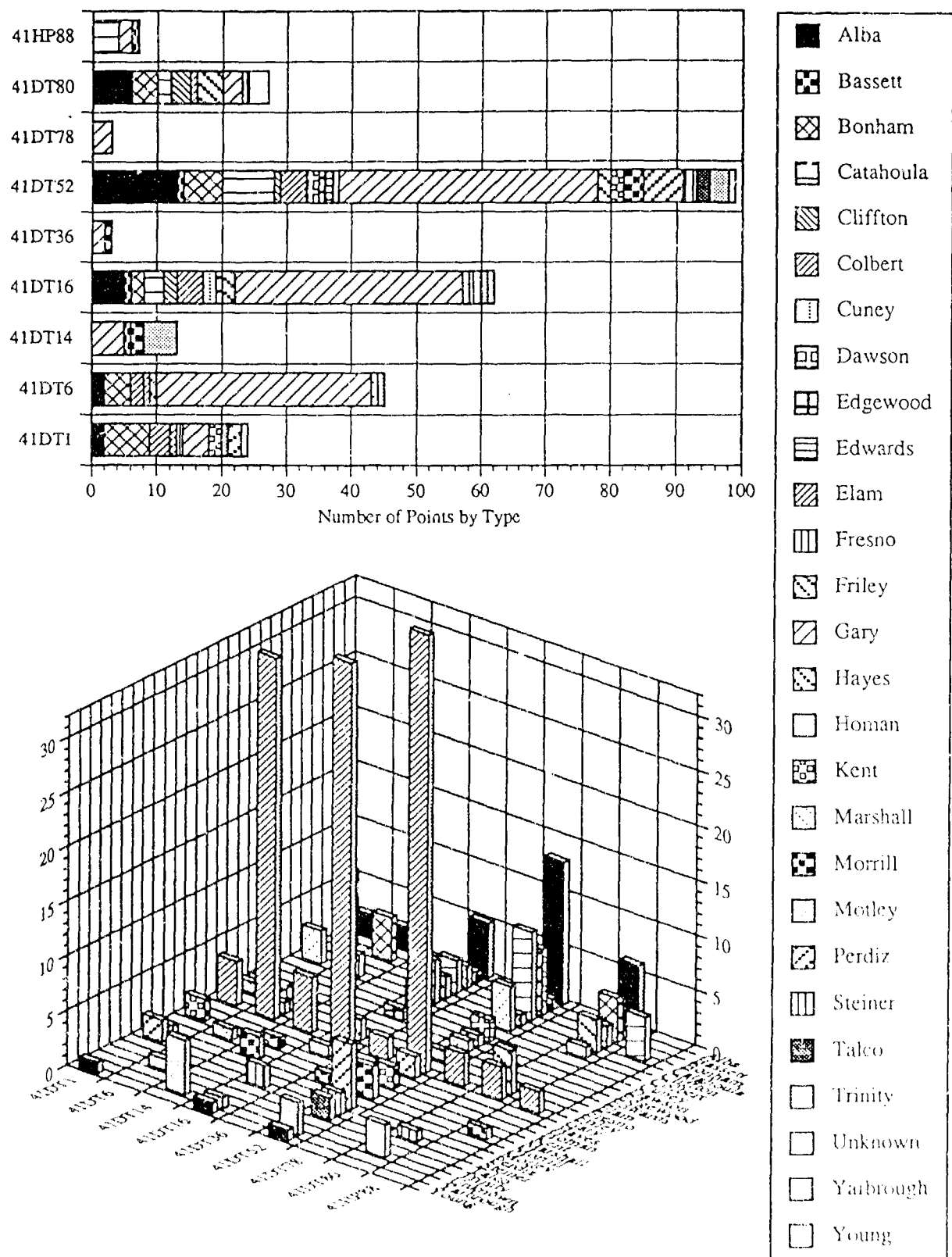


Figure C-2. Distribution of named projectile point types at nine sites in the Delivery Order Number 7 study area.

Finally, there are miscellaneous arrow point types represented by few specimens. These are Young (n=3), Bassett (n=2), Cuney (n=2), Fresno (n=2), Hayes (n=2), Talco (n=2), Edwards (n=1), and Homan (n=1).

SUMMARY

The projectile point assemblage (n=284) used in this analysis was derived from nine sites (41DT1, 41DT6, 41DT14, 41DT16, 41DT36, 41DT52, 41DT78, 41DT80, and 41HP88) which have received intensive investigations since the 1970s. Site 41DT52 produced 34.9% of the analyzed assemblage, followed by 41DT16 with 22.2%, and 41DT6 with 15.8% of the assemblage. Site 41DT80 produced 9.5% of the assemblage followed by 41DT1 (8.5%) and 41DT14 (4.6%). Site 41HP88 produced 2.5%, and sites 41DT36 and 41DT75 produced 1.1% each.

The vast majority of all lithic raw materials are Ogallala quartzite derived from the Uvalde veneer gravel. One Yarbrough from 41DT14 was made of petrified wood. Non-local chert used in dart points included an Edwards and unidentified chert-type from 41DT14. Other non-local chert were used in the manufacture of a Motley from site 41DT1, a Gary and a Non-Texas type from 41DT16, a Kent from 41DT52, and a Trinity from 41DT6.

Non-local chert were used in the production of only four arrow points. These include two Bonham points from 41DT1 and a Perdiz from 41DT1. An Alba point from 41DT80 was made of Ouachita novaculite.

The projectile point assemblage in this analysis dates primarily from the Middle to Late Archaic through the Early Ceramic, Late Prehistoric, and Protohistoric periods. Although the assemblages from the nine sites have been derived from variable levels of data recovery, general statements of relative cultural presence can be derived. During the Middle to Late Archaic, cultural groups intensified their occupation/use of the Cooper Lake area. During the Woodland and/or the Early Ceramic, groups progressed toward sedentism, and appear to have nearly doubled this occupation. During the Late Ceramic or Late Prehistoric, a similar level of occupation continued. This occupation dropped considerably after A.D. 1400.

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Archaeobotanical Analysis

Cathy J. Crane

Appendix

D

INTRODUCTION

Flotation was not used at the Cooper Lake sites excavated during the 1970s, and as a result, a considerable amount of information about plant utilization at these sites appears to have been lost. Almost all of the plant remains in the collections from these sites were recovered with $\frac{1}{8}$ in (0.317 cm) or $\frac{1}{4}$ in (0.635 cm) screens and consist mostly of nutshell, wood charcoal, and/or modern uncarbonized plant materials. The exceptions to this are samples from squares 112 and 142 at the Arnold site 41HP102 (X41HP34), which were fine-screened, presumably with window mesh. These fine-screened samples contained a larger quantity and diversity of carbonized plant remains, and overall they more closely resemble the archaeobotanical assemblages collected by flotation during the 1987 field season at Cooper Lake.

Despite the inadequacies of the recovery methods used during the 1970s excavations, an examination of the archaeobotanical remains in the collections resulted in the discovery of information about plant utilization at these sites, which was not previously reported. Samples from eleven sites were examined, and at least four sites (41HP102 [X41HP34], 41DT16 [X41DT33], 41DT52 [X41DT36], and 41DT84 [X41DT72]) appear to have potentially good plant preservation.

METHODOLOGY

The samples recovered with $\frac{1}{8}$ in (.317 cm) screen were small, and they were completely scanned with a binocular microscope at low magnification. The fine-screened samples from the Arnold site (41HP102 [X41HP34]), however, contained carbonized plant remains mixed with a large amount of gravelly/sandy matrix. Consequently, it was necessary to sub-sample them. This was done by splitting each sample in half, and passing the half to be analyzed through a series of graduated geological sieves. All plant remains larger than 2 mm were sorted and identified. The fractions smaller than 2 mm were scanned for seeds, tuber fragments, squash rind, and other plant remains not present in the larger fractions. Seeds were counted. All other plant remains were weighed with an electronic gram scale.

Many samples contained uncarbonized plant materials. Due to the generally fresh appearance of these remains and the unlikelihood of uncarbonized plant materials being preserved at open sites in northeast Texas, they were considered to be modern contaminants. Since most of the sites investigated were in formerly plowed fields, these organic remains are most likely derived from agricultural activities.

THE ARNOLD SITE (41HP102 [X41HP34])

From the Arnold site (41HP102 [X41HP34]), 23 samples recovered with $\frac{1}{8}$ in screen were examined. However, little information about plant utilization could be obtained from these samples. A majority of the plant remains in them consisted of modern seeds and uncarbonized nutshell fragments. Small amounts of carbonized hickory nutshell and wood charcoal were present in approximately 50% of the samples, and one contained a fragment of a carbonized grape seed.

Eight fine screen samples from Units 112 and 142 were also examined. In contrast to the $\frac{1}{8}$ in screen samples, these contained significant quantities of carbonized plant remains, and overall they compare more favorably with the plant assemblages from 41DT124 and 41DT80, which were recovered by flotation during the 1987 field

season at Cooper Lake. The ubiquity scores (percentage of samples containing each plant taxon) for the Arnold site fine screen samples are compared to the ubiquity percentages from the Doctors Creek site (41DT124) and the Thomas site (41DT80) in Table D-1.

Table D-1 shows that the most notable difference between these sites is the almost complete lack of seeds from the Arnold site. However, since most of these seeds range from 1-3 mm in size, they would not have been recovered with the window screen used at the Arnold site. The smaller percentage of samples containing squash rind and tuber (c.f. *Psoralea*) fragments, as well as the complete lack of maize at the Arnold site, are also most likely a result of the recovery method used.

Despite the small number of samples from the Arnold site and the inadequacy of the recovery method used, the data suggest that the diet of the

TABLE D-1

Ubiquity of Plant Remains from Sites 41DT124, 41DT80, and 41HP102,
Cooper Lake Project Area

Taxon	41DT124 (%)	41DT80 (%)	41HP102 (%)
Acorn Shell	71.4	76.9	75.0
Black Walnut Nutshell	-	-	25.0
<i>Chenopodium</i> seeds	9.5	23.1	-
<i>Convolvulus</i> seeds	9.0	-	-
<i>Euphorbia</i> seeds	4.8	-	-
<i>Gallium</i> seeds	9.5	3.8	-
Hickory Nutshell	100.0	100.0	100.0
<i>Iva annua</i> seeds	14.3	7.7	-
<i>Lathyrus/Vicia</i> seeds	23.8	23.1	-
Maize	19.1	7.7	-
Pecan Nutshell	76.2	30.8	87.5
<i>Polygonum</i> seeds	4.8	3.8	-
<i>Rhus</i> seeds	12.5	-	-
<i>Rubus</i> seeds	4.8	3.8	-
<i>Scirpus</i> seeds	3.8	-	-
<i>Scleria</i> seeds	9.5	-	-
Squash Pind	71.4	61.5	25.0
Tuber (c.f. <i>Psoralea</i>)	80.9	65.4	37.5

SOURCE: Percentages for 41DT124 and 41DT80 from Crane (1993).

inhabitants at this site did not differ radically from that of their neighbors at 41DT80 and 41DT124. Differences in nut exploitation such as the absence of black walnut at 41DT124 and 41DT80 and the lower percentage of pecans at 41DT80 are probably the result of differences in local availability of these trees.

41DT16 (X41DT33)

Thirty-three samples from this site were analyzed. They were all recovered with $\frac{1}{8}$ in (.317 cm) screen, and as a result, most of the carbonized plant remains consisted of nutshell fragments. Hickory nutshell, which is thick-walled and preserves best, was present in 72.7% of the samples. Whereas, pecan nutshell and acorn shell were present in only 3% and 6% respectively, and c.f. *Psoralea* tuber fragments were present in one sample. One persimmon seed was also recovered.

The low percentages of samples containing pecan, acorn or tuber fragments and the absence of other plant taxa, is undoubtedly a direct consequence of the screen size used to recover the remains. However, the fact that 72.7% of the samples contained carbonized plant materials, suggests that plant preservation was relatively good at this site. If flotation had been used, it is likely that a significant amount of carbonized plant remains would have been recovered. Instead, the recovery method used makes it impossible to say much about plant utilization at this site. Except for the persimmon seed, the types of plant remains recovered at 41DT16 are typical of those found at other Cooper Lake sites.

41DT52 (X41DT36)

The 24 samples from this site were screened with $\frac{1}{8}$ in (.317 cm) mesh, which resulted in the recovery of a small amount of carbonized plant remains. Hickory nutshell was present in only 45.8% of the samples, and one sample contained c.f. *Psoralea* tuber fragments. Consequently, little can be ascertained about plant utilization at this site.

41DT84 (X41DT72)

Only two samples were obtained from this site, and both were processed with $\frac{1}{8}$ in (.317 cm) screen. Hickory, pecan, and acorn nutshell, as well as wood charcoal, were all recovered from a trash pit. Although more samples obviously are needed from this site, it shows some potential for having good plant preservation.

OTHER SITES

Samples were also examined from the following sites: 41HP77 (X41HP5); 41HP87 (X41HP18); 41HP88 (X41HP20); 41HP103 (X41HP35); 41DT42 (X41DT25); 41DT44 (X41DT27); and 41DT75 (X41DT61). All of the samples were processed with $\frac{1}{8}$ in (.317 cm) or $\frac{1}{4}$ in (.635 cm) screen. Very little other than modern uncarbonized plant materials was present in them. Sites 41HP77 (X41HP5) and 41HP103 (X41HP35) each had one sample containing a small amount of wood charcoal, and one sample from 41DT75 (X41DT61) contained 0.02 g of hickory nutshell.

THE LAWSON SITE (41HP78)

This site was excavated during the 1987 field season, and flotation was used. The plant remains recovered from this site were reported by Crane (1993). Two additional flotation samples from Features 1 and 4 have been analyzed since that report was written. Although other samples were available, the two samples selected were the only ones that did not contain unacceptably high levels of modern contaminants. The carbonized plant remains present in Features 1 and 4 are listed in Table D-2.

The additional two samples did not significantly change the ubiquity of floral taxa at the site. Plant preservation at 41HP78 does not appear to be as good as at the Thomas site (41DT80) and the Doctors Creek site (41DT124). The complete lack of seeds at the Lawson site could be indicative of preservation problems.

TABLE D-2

Ubiquity of Carbonized Plant Remains from the Lawson Site (41HP78),
Cooper Lake Project Area

Feature 1	Feature 4 (west half)	Ubiquity (%)
0.01 g <i>Carya</i> sp. (hickory) nutshell	1.23 g <i>Carya</i> sp. (hickory) nutshell	Hickory nutshell 100%
0.01 g <i>Quercus</i> sp. (acorn) shell	0.01 g c.f. <i>Psoralea</i> tuber fragments	Pecan nutshell 50%
4.36 g wood charcoal	0.01 g <i>Cucurbita</i> sp. (squash) rind	Acorn shell 50%
	0.02 g wood charcoal	Squash rind 50%
		Tuber (c.f. <i>Psoralea</i>) 90%
		Rhizome 20%
		Wood charcoal 100%

**REMAINS FROM THE 1989-1990
FIELD SEASON**

Only a small number of flotation samples were collected during the reconnaissance level testing at 41HP159, 41DT161, 41HP162, 41HP168, and 41HP175. All of these sites have heavy clay soils, and only very small quantities of carbonized plant remains were recovered. Deflocculation of the clay before flotation probably would have improved the recovery rates at these sites. The plant taxa, which were present in the flotation samples, are typical of the other Cooper Lake sites.

41HP159

Six flotation samples from this site were analyzed. Feature 1 contained small amounts of hickory nutshell, c.f. *Psoralea* tuber, and wood charcoal. None of the other samples contained any carbonized plant remains.

41DT161

Only one sample from this site was examined. Carbonized plant remains from Feature 1 included hickory nutshell, squash rind, and wood charcoal.

41HP162

Two flotation samples from this site were analyzed. Feature 1 contained a small amount of c.f. *Psoralea* tuber fragments and wood charcoal. The fill from the hearth found in BHT 6 only contained a minute quantity of wood charcoal.

41HP168

Three flotation samples were collected from this site. None of them contained carbonized plant remains.

41HP175

Two samples from this site were examined. Feature 1 in the north trench contained hickory nutshell (0.07 g), wood charcoal (0.02 g), and some unidentified plant remains (0.01 g). The other sample acquired from shovel tests contained a small amount of wood charcoal (0.01 g).

**ABORIGINAL PLANT UTILIZATION
ON THE BLACKLAND PRAIRIE**

The archaeobotanical assemblages from sites in the Cooper Lake (Crane 1993), Richland

Creek (Fritz 1985; Martin et al. 1987) and the Joe Pool Lake (Fritz 1986) reservoir areas indicate that, although some regional differences occurred, the groups living on the Blackland Prairie practiced similar subsistence strategies. These groups relied mainly upon hunting and gathering, but cultigens (particularly maize) may have become more important to them after A.D. 1000. The earliest archaeological contexts for maize in the Trans-Mississippi South are dated ca. A.D. 200–300 (Rose and Hoffman 1989:2), but the regular consumption of maize is not clearly demonstrated in the archaeological record until ca. A.D. 1300–1400 (Rose and Hoffman 1989:3).

Squash was cultivated by groups within the Blackland Prairie from at least the Late Archaic period onwards. Feature 2 at 41HP137, which is dated at 126 ± 51 B.C. (SMU-1917; Haas 1993:I-4), contained the earliest squash rind found to date in the region (Crane 1993), but it is probable that squash cultivation on the Blackland Prairie began earlier in the Archaic. By the Late Prehistoric period, squash constituted a significant portion of the diet for some of these groups. For example, squash rind was present in 71.4% of the features at the Doctors Creek site (41DT124) and in 61.5% of the features at the Thomas site (41DT80; Crane 1993).

The Cobb-Pool site (41DL148) plant assemblage indicates a heavy reliance on maize, which occurred in 71.1% of the samples, dating ca. A.D. 1200 (Fritz 1986). This high percentage of maize is atypical of archaeobotanical assemblages from the Blackland Prairie sites. For example, minute amounts of maize occurred in only 19.1% of the non-posthole features from the Doctors Creek site (41DT124; Crane 1993). A radiocarbon assay run on carbonized nutshell from the single dated cultural feature at 41DT124 which contained maize, Feature 14 (a hearth), yielded a date of A.D. 1189 ± 32 (SMU-2026). Minute amounts of maize were also found in 7.7% of the features at the Thomas site (41DT80; Crane 1993). A radiocarbon assay run on carbonized nutshell and charcoal from the single dated cultural feature at 41DT180 which contained maize, Feature 2 (a large pit), yielded a date of A.D. 1122 ± 49 (SMU-1903, calibrated). In the Richland Creek area, maize did not occur until after A.D. 1300 at the Bird Point Island site, where it was present in

only 4% of the samples (Martin et al. 1987).

Although it is possible that maize simply did not play an important part in the diet of most Late Prehistoric groups on the Blackland Prairie, it should be noted that the archaeobotanical record alone is not always a reliable source of information on diet composition due to factors such as differential preservation. The plant assemblages from the Doctors Creek site and the Thomas site, for example, showed signs of having undergone post-depositional erosion resulting in some pieces of wood charcoal and hickory nutshell being ground into spherical-shaped pellets (Crane 1993). The small number of maize cupules and kernel fragments recovered from these sites were in such poor condition that they were hardly recognizable. This preservation problem and observation that the high caries rates of Cooper Lake skeletal populations are indicative of an agricultural diet (Burnett and Harmon 1993), certainly suggest that the archaeobotanical assemblages may be too unreliable for determining the extent of maize consumption by these groups.

In contrast, there is no doubt that the tuber, which has been tentatively identified as c.f. *Psoralea* (Fritz 1985, 1986; Crane 1993) played an important role in the economies of the Blackland Prairie groups. The cortex fragments of this tuber preserved remarkably well, and often could be recognized even when they were less than 2 mm in size. This tuber occurred in high percentages of the samples from most sites. For example, it was present in 90% of the samples from the Lawson site (41HP78), in 80.2% from the Doctors Creek site (41DT124), and in 82.6% from Bird Point Island in Richland Creek (Crane 1993). It was undoubtedly a staple in the diet of these groups, and if the *Psoralea* identification is correct, this tuber could have been gathered from approximately April to September. The presence of this tuber in two features at 41HP137 indicates that it was utilized by the Blackland Prairie groups as early as the Late Archaic (Crane 1993). Small fragments have also been identified in Feature 1 at 41HP159, which is dated to 3587 ± 107 B.C. (SMU-2222, dendrocalibrated).

Nut crops played an important role in the economies of the Blackland Prairie groups. Hickory was the dominant nut type consumed at the Cooper Lake and Richland Creek sites, but

pecans and acorns were also important. As hickory nuts were not locally available in the Joe Pool Lake area, however, groups in that region relied upon black walnuts and acorns (Fritz 1986).

The Blackland Prairie groups utilized the seeds and/or fruits from a number of native plants, and sumpweed (*Iva annua*), goosefoot (*Chenopodium*), pea-vine or vetch (*Lathyrus/Vicia*), and knotweed (*Polygonum*) appear to have been the most important. In the northern Caddoan region of Arkansas and Oklahoma, the cultivation of native seed crops flourished during the first millennium A.D., but they decreased in importance after A.D. 1000 when maize cultivation was intensified (Rose and Hoffman 1989). A cultivated *Iva annua* seed was found at the Spoonbill site (41WD109) located in the Post Oak Savannah a short distance south of Cooper Lake (Crane 1993), but there is no evidence that *Iva* or any of the other starchy seeds were cultivated by the Blackland Prairie groups. However, it must be emphasized that seed preservation was not good at many of the sites, especially in the Cooper Lake area. Consequently, there is not enough data to determine whether the cultivation of native plants was practiced by the Blackland Prairie groups, or what role such crops played in their economies.

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